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AND EXPRESSION

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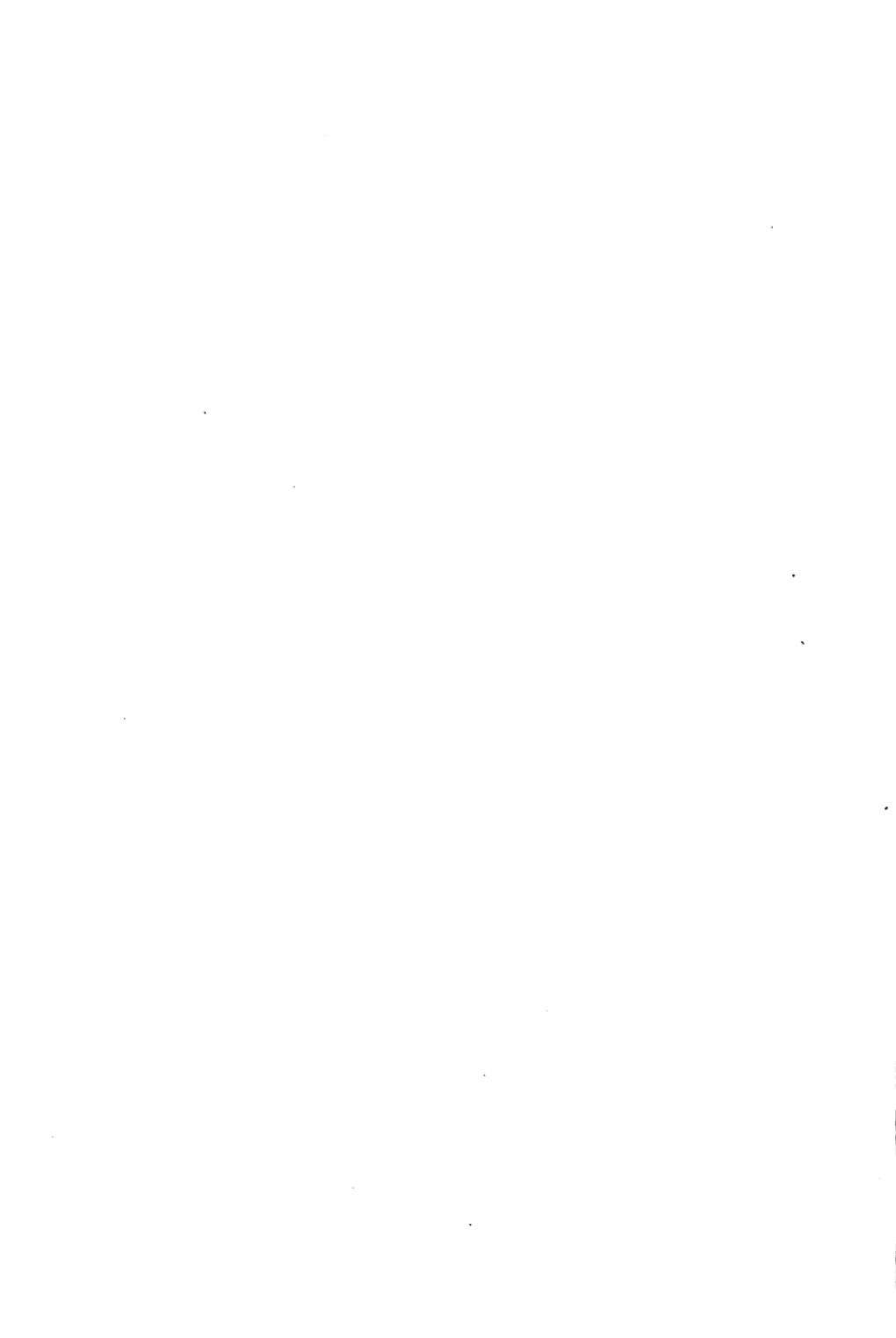
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THE CONTEMPORARY SCIENCE SERIES.

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PHYSIOGNOMY AND EXPRESSION.



PHYSIOGNOMY AND EXPRESSION

BY

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President of the Italian Society of Anthropology.*

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P R E F A C E.

THIS book is a page of psychology—a study on the human countenance and on human expression. Scientific both in its end and in its method, it takes up the study of expression at the point where Darwin left it, and modestly claims to have gone a step further.

I have set myself the task of separating, once for all, positive observations from the number of bad guesses, ingenious conjectures, which have hitherto encumbered the path of these studies. My wish has been to render to science that which is due to science, and to imagination that which is due to imagination. The human countenance interests all ; it is a book in which all must read, every day and every hour. The psychologist and artist will find in this work new facts and facts already known, but interpreted by new theories. Perhaps it may also throw into prominence some of the laws to which human expression is subject.

P. M.



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PHYSIOGNOMY
AND THE
EXPRESSION OF EMOTIONS.

PART I.
THE HUMAN COUNTENANCE.

CHAPTER I.

HISTORICAL SKETCH OF THE SCIENCE OF PHYSIOGNOMY
AND OF HUMAN EXPRESSION.

IN the restricted portion of the world which our human eyes can penetrate we see the first germs of living beings born and developing in conformity with laws identical with those which rule over the birth and evolution of sciences in the tranquil laboratory of the intellect. At first a confused vortex of atoms appears, each seeking the other and grouping themselves in attempts to form the first combinations of force and the simplest symmetries of form. Soon the organs of inferior order indistinctly manifest themselves; the parts which were at first confused are differentiated little by little. In proportion as the members take shape and their articulations are established, they go on to mark out a scale of large things, enclosing others small and very small, which will in turn become very large; in like manner an infinite series of germs contained in one germ will successively

give birth to new forms and to new descendants. And finally we find ourselves face to face with an organism, provided with distinct members, which claims for itself a part of space, a share of the sun, and a name. Thus are born the mushroom and the oak, the ant and the man ; in like manner science too is born and develops.

The progress of all science has also been the progress of that science which we call physiognomy or metoposcopy, different names signifying the same thing—the study of the human countenance. Long before these words had found a place in our dictionaries, and in the history of science, man had looked into the face of his fellow-man to read there joy and pain, hatred and love, and had sought to draw thence conclusions both curious and of daily practical use. There is no untutored people, no rudimentary language which has not incorporated in some proverb the result of these first sports of divination. Humpbacks, squints, sparkling or dull eyes, the varying length of the nose, the varying width of the mouth, all are honoured or condemned in popular proverbs. These proverbs are the first germs of the embryonic substance which later on yield materials for a new science.

In these first attempts we always meet the infantine inexperience of ignorance ; sympathies and antipathies are there translated into irrefragable dogmas and verdicts without appeal ; instinct and sentiment hold the place of observation and calculation. All is seasoned with the magic which is one of the original sins of the human family. This seasoning always becomes more abundant in proportion as the need of new foods increases, and ends by being almost entirely substituted for the real nourishment, which is insufficient to satisfy the great hunger. And then man, not contented to examine the human face and translate it into proverbs and into physiognomical laws of fortuitous coincidences or suggestions of sympathy and antipathy, goes on to seek in the heavens and among the

stars relations between the constellations and our features, and erects this odd edifice of judicial astrology—a veritable white magic applied to the study of the human face. Magic demands a magician; he envelops himself in the mystery of the inconceivable to explain the unintelligible, and magic becomes an industry, a trade which fattens a small number of knaves at the expense of a large number of fools.

Such is the true origin, little honourable as it may be, of Physiognomy. Then come the first writers, who collect from the mouths of the people and in their proverbs the scattered materials of the new science; they add numerous conjectures of their own, give a name to their doctrine, and return to the ignorant crowd in a dogmatic form all that they first received from them. A literature in its childhood is always encyclopædic. Therefore the first elements of physiognomy are to be found in the Bible, in the Fathers, in the philosophers, and in the poets. Giovanni Battista Dalla Porta was right when he wrote on the title-page of the beautiful *First Book* of his work¹ that *physiognomy was born of natural principles*; and in his preamble, in a page abounding in audacity and powerful historical syntheses, he was justified in showing how the germs of the science of which he was beginning the study were to be found scattered in the works of the great minds who had preceded him. I have pleasure in quoting some passages.

"Adamantius said that the character is expressed by the forehead and the eyes, even when the mouth is silent. The philosopher Cleanthes was wont to say, after Zeno, that dispositions might be recognised from the face. The Pythagoreans had a rule, according to Iamblichus, when disciples came to them demanding to be instructed, to accept none, unless they had ascertained by clear

¹ Gio. Battista Dalla Porta Napolitano, *Della Fisionomia dell' huomo*. Libri sei, Padova, 1627, p. 1.

indications, drawn from their countenances and their whole external appearance, that they would succeed in learning. They said that nature constitutes the body after the soul, and gives to this the instruments which are necessary for it, that she shows us in the body the image of the soul, or rather that the one is the pattern of the other. We read in Plato that Socrates admitted none to philosophy unless assured by examining his face that he was suited to it.

"The physiognomy of Alcibiades indicated, said Plutarch, that he was destined to raise himself to the highest rank in the republic. Plato, and after him Aristotle, said that nature proportions the body to the activity of the soul. In fact every instrument which is made with a view to a certain thing must be proportioned to this thing. All the parts of the body are made for some thing, and this cause for which a thing is made is an action; whence it clearly follows that the body altogether has been created by nature with a view to an excellent action. Nestor, according to Homer, by the resemblance which he finds in the face of Telemachus, conjectures as to what his soul must be.

"'By certain signs that I discern upon thy face, O illustrious youth, I recognise whose son thou art. I do not wonder to see such splendour in thy eyes. Thy face is proud and generous, thy great eloquence and thy reason recall to me thy father. What youth could such a one as thou be, were he not the son of the great Ulysses?'"

Aristotle wrote a book on the physiognomy, and Plato, although he was not an evolutionist, compared the physiognomy of man to that of animals. Dalla Porta, even while he refuted the great Greek philosopher on this point, and maintained that it was unreasonable to imagine that it would be possible to find a man whose body was entirely similar to that of an animal, is still continually making

analogies in his work between man and the animals, and illustrates his comparisons by numerous figures.

To quote an example, Plato had said that the genus lion must be generous and bold; in other words, that a man would be courageous if he had something of the lion, such as a broad chest, wide and powerful shoulders, etc. In his turn, Dalla Porta continually draws parallels between peacocks, dogs, horses, asses, oxen, cocks, pigs, and other brutes on the one side, and men on the other. Two examples will suffice to show up to what point the Neapolitan physiognomist pushed these analogies. On page 115 *bis* of the edition already quoted he compares a marine fish, the skate, with the Emperor Domitian—

"In the following plate is seen the face of Domitian represented after his statue in marble and antique medals, and opposite a skate from nature."

And on page 164 *bis* are seen the lower limbs of an ape and those of a man with this indication—

"In the place below will be found the buttocks of the ape and those of a thin and withered man."

It appears, however, that these impious analogies formed no obstacle in those days to dying in the odour of sanctity, for Dalla Porta ended his days surrounded by universal veneration, and was interred in a church.

The Jesuit Niquetius, who was one of the most learned among those who wrote upon physiognomy in the seventeenth century, quotes in his work 129 authors, without counting, he says, *Scripturam sacram, quæ, ut ait Origines, scientiarum est universitas*, and among them St. Ambrose, St. Gregory the Great, St. Gregory of Nanzianzen, St. Gregory of Nyssa, Saint Jerome, Saint Augustin, Saint Peter Damian, Saint Thomas, among the saints; Aristotle, Plato, Cardano, Seneca, Tertullian, among the philosophers and the theologians; Xenophon, Strabo, Plutarch, Tacitus, among the historians; Aristophanes, Juvenal, Lucan, Lucian, Martial, Petronius, among the poets;

Averroes, Avicenna, Hippocrates, Celsus, Galen, Pliny, among the naturalists and physicians.¹

The seventeenth century was the golden age of astrological or semi-astrological physiognomy. Then, more than ever, men had a passion for the mysterious, for enigmas which had a scientific colouring. A Spanish writer, Jerome Cortes, born at Valencia, said naïvely in a very curious book, "Physiognomy is nothing but an ingenious and subtle science of human nature, thanks to which one may know the good or bad complexion, the virtues or vices, of the man considered as an animal."²

In fact, the good Cortes, to be consistent with his definition, gave us in his volume after his treatise on the physiognomy other curious things—such as the praise of rosemary (*Tratato segundo de las excelencias del Romero y su calidad*), the praise of the elixir of life, and a number of recipes, among which was that of a powder of frogs, *que tiene virtud de soldar las venas rompidas y un unguento preciosissimo para sanar toda fistola y llaga vieja, y otros males* (which has the property of healing burst veins, and which is a very precious ointment to cure all fistulas and old wounds, and other evils).

The works on judicial astronomy are very numerous. In them the most singular and ridiculous assertions are found. One would say that these books must have been written either by a fool or a drunkard. It will be enough to quote as an example Cardano,³ who has hazarded the oddest forecasts in his work, not only as to the character as conjectured from the physiognomy, its wrinkles and its

¹ R. P. Honoratii Niquetii, e Societate Jesu, sacerdotis, theologi, Physiognomia Humana, libri iv. distincta. Editio prima, Lugduni, 1648.

² Hieronymo Cortes, *l'hisonomie y varios Secretos de Natura'esa*, etc. Barcelona, 1610.

³ H. Cardani Medici Mediolanensis, Metoposcopia, etc. Lutetæ Parisiorum, 1658.

spots, but also as to the events which would happen in the course of life. In Plate I., figs. *a*, *b*, *c*, specimens from his *Fisonomia astrologica* will be found.

On the forehead seven lines are drawn, consecrated, proceeding from above down to Saturn, Jupiter, Mars, the Sun, Venus, Mercury, and the Moon. As the lines were straight, oblique, or crossed, so the response varied. Fig. *b*, for example, represents a man who, according to the signs on his forehead, was doomed to die by hanging or by drowning. Fig. *c* another who must of necessity be *tristis* or *vilius*.

De la Chambre exposes in these terms the sophistry on which astrological physiognomy is founded¹—

“The head is indubitably the epitome of the whole heavens: like these it has its constellations and its signs. But if we note the stars, their situation and their movements, without knowing their nature, nor why they are thus disposed, we may say as much of all parts of the face.”

De la Chambre is a judicious writer. Although he lived in the midst of astrology and chiromancy he revolted against the prejudices of his time, and he dared, although timidly, to write a chapter entitled—*The judgment we must pass on Chiromancy and Metoposcopy*.² He does not deny all, he does not assent to all, and concludes by saying that it is necessary to guard against exaggerations, that there is much truth in astrology, but not so much as the chiromancist astrologers pretend.

It was, however, Dalla Porta who had the honour of combatting judicial astrology unmasked. After the book which we have already quoted, he published another—

Of Celestial Physiognomy: six books in which the falsehood of judicial astronomy is established, and wherein the way by

¹ De la Chambre, *L'art de connaître les hommes*. Amsterdam, 1660.

² *Ibidem*, p. 268.

which one may recognise in natural causes all that the aspect, the appearance, and the features of men can physically signify and announce, is put forth. (Padua, 1623.)

In this work the Neapolitan author demonstrates that the features of a man are due to his temperament and not to the stars; and having cited as an example the opinions of astrologers on the character of men born under the influence of Saturn, he adds—

“We have reported their opinions, not to approve them, but to refute them *as old women's stories*. Dissimulating their falsehood, presenting as coming from heaven and the stars magnificent and prodigious things, they make us accept as divine that which is derived from natural sources. We have said that the Saturnians are said to be melancholy, cold, and sapless. If we investigate the opinion of physicians, Galen attributes to the melancholy, cold, and sapless a hard and frail body, rough hair, a humid or livid complexion; and to the melancholy generally black and bristly hair, bushy and meeting eyebrows, thick lips, and flattened nose. Others give them irregular teeth and broad chests. All that does not come from the stars, but from the temperament, as the physicians say.”

Of all the writers of the seventeenth century Dalla Porta is the most famous; he has, too, become for many people the only representative of ancient physiognomy. Under his portrait, which adorns many editions of his work, we read these verses—

“Blandus honos virtusque simul delubra tenebant,
Sed binis templis unica *Porta* fuit,
Tu quoque virtutem conjunctam nactus honori,
Amborum digne *Porta* vocandus eris.”

Seventeenth century distiches, if ever any were !

Not only did Dalla Porta first openly oppose judicial astrology, but he opened up a new era for the study of physiognomy. He could only make use of the scientific materials of his time, but he employed them with the

wise discernment of a positive philosopher, and his psychology is sound. He discussed the methods which may guide us in the study of the human physiognomy, and he investigated how, by the temperament of the whole body, its characteristics might be conjectured. Thus he merited his fame and justified the enthusiasm with which all learned Europe received his work, written first in Latin, then translated by him into Italian, and by others into French and Spanish.

In the seventeenth and eighteenth centuries this illustrious Neapolitan was the high-priest of physiognomy. All those who wrote subsequently pillaged him, either quoting or not quoting him, and drew plentifully from his *Encyclopædia*, where he had gathered all that the ancients had been able to say on the subject of the human physiognomy, and all that an observer could add to them.

Nquietius, whom we have already cited, was a very erudite writer and a good observer for his time. He also distinguished astrological from natural chiromancy. He also, like De la Chambre, felt a vague need to reject antique superstitions, and was a precursor of the experimental school which was to transform the world. The introduction to his natural chiromancy deserves recalling; he speaks in it of the importance of the hand—

“ Quid est enim manus? Zoroastro, admirabilis naturæ miraculum, Plutarcho, causa humanæ sapientiæ; Lactantio, rationis et sapientiæ magistra, aliis, mundi artifex, amicitiæ sedes, humanæ vitæ præsidium, corporis propugnaculum, capitis defensatrix, rationis satelles, interpres animi, conciliatrix divinæ gratiæ, nervus orationis, officina sanctitatis. Isidoro dicitur manus, quasi munus, nimirum totius corporis munus; ministrat enim cibum ori, ceterisque membris omnibus opitulatur. Denique fidei symbolum est, unde porrigeret dextram est fidem promittere, quod colligitur ex Virgilio, Æneid.

“ Pars mihi pacis erit dextram tetigisse tyrannis.”

Et Lib. 3.

“ Ipse pater dextram Anchisis haud multa moratus
Dat juveni, atque animum presenti pignore firmat.”

When Niquetius gives us some sketches of the expression of passion and of human characteristics, he paints very happily. Here is his description of an audacious man—

“ Audacis viri figura :

Os exsertum, vultus horridus, aspera frons, supercilia arcuata, oblonga; nasus longior; dentes longi; breve collum; brachia longiora, quæ genua attingant; pectus latum; humeri elevati; oculi cæsii, rubei, salientes; torvus aspectus.”

Towards the end of the seventeenth century, another Italian writer, Ghiradelli, published a large volume on physiognomy, whose title is very characteristic of this inflated and bombastic period. Here is its exact arrangement—

“ Cephalogy
Physiognomical.

Divided into ten half scores.

In which, in conformity with the documents of Aristotle,

And of other natural philosophers, with brief discourse and careful observations, we examine the physiognomies Of one hundred human heads Which have been engraved in this Work.

After which, by signs and conjectures, we demonstrate the different inclinations of men and women.

By Cornelio Ghiradelli, Bolognese,
The Ingenious Vespertin Academician.

As many sonnets of divers excellent poets and academicians have been added, in which the physiognomies previously cited are gallantly described.

And some additions to each discourse of the indefatigable Vespertin Academician.

At Bologna,
At the house of the Heirs of the Gospel,
Dozzi & Company,
1672.”

The method employed by this ingenious and indefatigable academician in studying the human physiognomy is

indeed very curious. He shows us a hundred human faces, drawn after life—very ill, it is true—and finely framed in a border ornamented with irregular sculpturings. Each is accompanied by a Latin distich, by a sonnet, and some remarks by the author. I shall quote, as an example, the distichs and sonnets which refer to a good and bad countenance. I will spare the reader Ghiradelli's prolix commentary.

We have before us a beautiful round face, which, according to the verses, should belong to a fair man. Here is the distich—

“ Moribus ingenuis præclaraque indole credas,
Quem flavescenti videris esse coma.”

And his lordship, Cesare Orrini, graciously offered to the author the following sonnet, which is read under the portrait—

“ The fair locks with which nature has so splendidly adorned thy glorious brow, renders her other gifts so clear and so manifest that thought can figure its lively image. And thou must have no fear shouldst thou be called upon to arm and fight, for a powerful and ever-present force is there to protect thee and to oppose itself to the influence of fatal stars.

“ Kings bear crowns of glittering gold, and the idolising, worshipping crowd bow before the perishable rays with which they shine resplendent.

“ But thou, under thy golden hair, thou possessest a more truly glorious gift, so great a treasure of virtue that thou shall rise above the sun and shalt attain to the heavens.”

On page 17 our ingenious academician shows us a frightful snout, framed in the palm of a hand, as if between the hands of a barber about to shave it; and below this audacious distich, in the manner of a pillory label—

“ Hispida cæsaries pigrum notat, atque timentem
Quemque mala videas calliditate frui.”

Then comes the sonnet, which, this time, is the work of an Arcadian—that is to say, of the Marquis Errico Rossi, member of the Arcadian Academy of Bologna—

" Remove thyself from here —remove thyself afar ; for to remain with thee is a misery for others ; thy mouth forms words contrary to thy thought ; thou art always ready to mingle lies with truth.

" Never hast thou dared to face a danger ; never hast thou taken thought for others ; thou fleest like the buck or the swift goat ; thou avoidest the passer-by from afar.

" To every noble spirit, to every honest heart thou art as a brier, and as thorns, a coward, deceiver, idle and evil.

" I cannot deny that if thy lips are lying, thy hair, stiff and bristly, is truthful and reveals thy vices."

Despite this academic trifling, Ghiradelli is a scholar and a sagacious observer ; his book may be studied with interest by those who wish to know what the science of physiognomy was in Italy towards the end of the seventeenth century. He devoted to the nose two discourses which are really very curious. He says, among other things, "that the nose helps to manifest passion and contempt. Doctors have examined several proverbs upon the movements of the nose when a man manifests some passion. For example, when we want to make fun of and mock another we make a certain movement of the nose referred to in the proverb: *Eum adunco naso suspendere*. And when we wish to express contempt we make a sign with the nose, which means *Eum naso rejicere*. And when we see anything unpleasant done to another, we twitch back the nostrils. When we get into a passion, the nostrils are dilated and the tip of the nose red."

Grattarola is an author who wrote in Latin upon Physiognomy, and who, in the order of time, precedes Ghiradelli. I have not been able to consult his work, but several passages of his cited by the writers of the seventeenth century do not testify to great originality.

Giovanni Ingegneri, bishop of Capo d'Istria, at the beginning of the same century, has left us a little treatise on *Natural Physiognomy*. He there gives sign of scanty erudition, and nearly always contents himself with

presenting in aphorisms the solutions of cabalistic science. A few examples will suffice—

- “A beard on a woman is a sign of little honesty.”
- “Excessive size of the brow is a sign of idleness.”
- “The smallness of the forehead indicates a choleric man.”
- “Very red eyes are the sign of a bad nature, inclined to cruelty.”
- “Bright eyes are the sign of wantonness.”
- “Those who are flat-nosed are very wanton.”
- “Men with curved noses are magnanimous.”

Scipione Chiaramonti of Cesena is one of the best physiognomists. He published his works only one year before Ingegneri.¹ Blondo, Finella, and some others belong to the same school.

Plenty of authors, plenty of volumes, but little originality, and plenty of plagiarism! Who knows how often we might have been dragged through the same ruts if towards the middle of the last century Lavater had not appeared to inaugurate a new era for this order of studies. He is the true precursor of the positive science, and he serves as a link between the writers of the seventeenth century and of modern times.

The physician, Ciro Spontoni, also devoted a little book of astrology to the study of the brow. (*Metoposcopy by the Measure of the Lines of the Brow.* Venice, 1626.) In a sketch of the history of physiognomy it is necessary also to mention chiromancy, which has lasted into our own day as a last vestige of the magic of the middle ages. When we glance at the books on chiromancy we are astonished at the serious way in which imagination has struggled to read our character, our intelligence, and our destiny in the capricious lines of the hand. I will cite the following works as the most important:—

La science curieuse ou traité de la chiromancie, etc., enriched with a great number of figures for the facility of

¹ *De conjectandis cuiusque moribus et latentibus animi affectibus.*

the reader. Paris, 1665, 1 vol., 212 pages. Adrian Sicler. *Chiromance royale nouvelle enrichie de figures, de moralites et des observations de la cabale*, etc. Gio-Battista Dalla Porta. *Della Chirofisnomia*. Two books translated from a Latin manuscript of Pompeo Sarnelli. Naples, 1677, 1 vol., 167 pages.

Lavater was neither a physician nor a naturalist; he was a citizen of Zurich, and a minister of the Gospel. Poet and painter, with a feminine nature and an ardent love for mankind, he carried into everything the glowing enthusiasm, the sudden convictions, the mobility of ideas which form the joy and the torment of all men endowed with excessive sensibility. It is sufficient to look at the beautiful portrait of himself which he has given us in his works to perceive at once, and with a glance, all his defects and his rare qualities. Expansive, open to every enthusiasm, mobile, but always keeping within the limits of goodness and honesty, he has commented on his portrait in a short autobiography which is a jewel of sincerity and gracefulness. Lavater is one of those few men who carry their temperament and nerves into everything, who say all things to all. As soon too as we have read a single page of his great work we know and love him. Both in face and character he much resembles Fénelon. It is said that one day Madame de Staël, walking with him and some common friends, suddenly stopped and cried, "How our dear Lavater resembles Fénelon! These are his features, his air, his countenance. It is truly Fénelon, but Fénelon slightly Swiss (*un peu Suisse*)."¹ He was also a poet, and left several epic poems, among others one which deserves comparison with Klopstock's *Messiah*, some religious dramas, canticles, sermons, theological writings, and some Swiss songs, which were very popular.

Lavater became a physiognomist, not by reading the authors who had preceded him, but by drawing with his rapid pencil faces which pleased or displeased him, and by

preserving his drawings with care. By dint of drawing and collecting, he found himself in possession of a considerable number of observations which, united almost without order and with no scholastic rule, crystallised as though spontaneously into a great encyclopædia enriched with five or six hundred plates, and which he called one fine day, *The Physiognomical Bible*.

The first edition appeared in folio in 1772; to-day very rare, it is still the best, because the figures were executed under the eyes of the author himself. After this first German edition there were others in French, in English, and in other languages. I possess that which was printed at the Hague from 1781 to 1803. It was begun by the author, but the fourth volume appeared after his death under the care of his son, a doctor of medicine. We recognise all the humanitarian and religious fervour of the author even in the title of this immortal work—*Essay on Physiognomy, destined to make man known and loved*.

The author is in fact inspired by love and by faith; transported by the liveliness of his feelings, he bursts every moment into hymns of admiration: now for the mouth which is so interesting a part of the face; now for the God who has made man so beautiful; now for the woman who is the enchantment of life; in a word, for all that presents itself to his loving eyes. It is related that in a long illness, the consequence of a wound which he had received in the attack on Zurich by the French, weakness caused him to fall into hallucinations and religious ecstasies. He imagined himself to be the apostle St. John, and present at the mysteries of the Apocalypse.

In Lavater there is no longer a trace of judicial astrology; nor is there servile imitation of the ancient writers, of whom besides he knew little. But the guesses of an individual man take the place of a scientific examination conducted by positive and rational methods. Feeling is substituted always and everywhere for science. Thence come the

imperfections of this beautiful work, which remains a grandiose monument of human genius, but which does not supply a firm basis on which to found other columns and other edifices. Admiration for, and love of, men are not enough to replace scientific observation; and the genius of Lavater does not suffice to atone for his complete ignorance in anatomy and in natural history.

Two anecdotes will serve better than anything else to show the weakness of his theory.

One day a stranger presented himself to him.

"M. Lavater," said he, "I have just arrived. Look at me well, for I have taken the journey from Paris to Zurich to see you, and to submit my countenance to your examination. Guess who I am!"

"I have already looked at you attentively. You have many characteristic features. To begin, you write. . . . You probably devote yourself professionally to literary work. . . . Yes, certainly, you are a man of letters."

"True, but of what sort?"

"I do not know. . . . Yet it appears to me that you are a philosopher . . . that you know how to seize the ridiculous side of things . . . that you have courage . . . originality . . . much wit. You might very well be the author of the *Tableau de Paris*, which I have just finished reading."

It was in fact Mercier.

When the mask of Mirabeau was sent to Lavater he guessed the great revolutionist. "One recognises at once," he said, "the man of terrible energy, unconquerable in his audacity, inexhaustible in his resources, resolute, haughty," etc.

But here is the reverse of the medal:—

One day his friend Zimmermann sent to him a very accentuated profile, with a letter written so as to greatly pique his curiosity. Lavater, who was wanting and expecting a portrait of Herder, imagined that this profile

was that of the great German philosopher, and went into ecstasies over the intellectual and poetical qualities of the man to whom it belonged.

This man was, on the contrary, an assassin executed at Hanover. That which happened to Lavater will always happen to those who take physiognomy for an exact science, and who confound the expression with the anatomy of features, as he always did without himself being aware of it. Yet the illustrious pastor of Zurich marks a new epoch in our studies, and his work will always be an inexhaustible mine of information for the artist and the psychologist. We may say of him as he said of Raphael—

“ When I wish to intoxicate myself with admiration for the greatness of the works of God, I have only to present to myself in imagination the face of Raphael. He will always be for me an apostolic man ; I mean that he is relatively to other painters what the apostles were relatively to other men.”

Lavater was the apostle of scientific physiognomy, and although Lichtenberg wrote against him the celebrated satire of the *Physiognomy of tails*, he will always remain one of the most sympathetic figures, the most beloved, the most brilliant, in the history of physiological sciences.

Lebrun, the celebrated painter of Louis XIV., wrote on physiognomy,¹ but in an academical manner. The types of the principal emotions which he has left us are mannered : they are caricatures and not studies after life, as we shall have several occasions to prove during the course of this book.

Among the artists who have studied the physiognomy is also the Italian, De Rubeis, a gentleman of Udine,

¹ Lebrun, *Conférences sur l'expression des différents caractères des passions*. Paris, 1667, in 4to. These lectures were reprinted in the edition of Lavater published by Moreau, 1820. See also by the same author, *Expressions des passions de l'âme*, in folio. Published by A. Suntach.

who published at Paris (1809) a book on portraits and on the best way of seizing faces.¹ He was a penetrating observer, and should be studied more than he is to-day.

The real science begins with Camper. This great anatomist gave his name to the famous facial angle which, to our own time, has served as a criterion and a measure to determine the rank of the human face, and of the snout of animals in the morphological series. Topinard² and myself have published some critical studies on the value of this criterion; but the facial angle of Camper will always be considered one of the most ingenious discoveries which have been made in this order of research. Camper in his work³ began to study the human countenance in different races, and traced the broad lines of an evolution of forms, while criticising with very close reasoning the brilliant superficiality of Buffon. In the third chapter of the second of the works quoted in the note he gives *physical observations on the difference of the features of the face, considered in profile, as the heads of apes, of ourang-outangs, of negroes and other peoples, tracing up to the antique heads.* "You will be astonished," he says, "to find among my first plates two heads of apes, then one of a negro, and then one of a camel." He opposes the opinion of some learned men who had admitted that negroes might be the offspring of the union of white women with apes. He says this

¹ G. Battista de Rubeis, *De' ritratti ossia trattato per cogliere le fisconomie.* Paris, 1809. Printed in Italian and in French.

² Topinard, *Étude sur Pierre Camper et sur l'angle facial dit de Camper.* Revue d'anthropologie, t. ii. Paris, 1871.—*Des Diverses espèces de prognathisme,* ibid. t. i. and t. iv.—Mantegazza, *Dei caratteri gerarchici del cranio umano.* Archivio per l'antrop. e l'Etnol. Florence, 1876, t. ii. p. 547.

³ Camper, *Discours sur le moyen de représenter les diverses passions, etc.—Dissertation physique sur les différences réelles que présentent les traits du visage.* Utrecht, 1791. Œuvres posthumes.

is not the place to demonstrate the absurdity of the assertion : but, however, he compares apes, negroes, and antique statues. This comparison appeared to him very bold : he made it, however, and theological prejudice did not prevent him from tracing the first lines of the evolution of human forms.

Charles Bell, a distinguished physiologist, published in 1806 the first edition of his work¹ on the anatomy and philosophy of expression, an epoch-making work in the history of expression. Lemoine² was right when he said "Charles Bell's book should be studied by every one who essays to make the face of man speak, by philosophers as well as by artists."

The German, Engel, published towards the end of last century a good book (*Letters on Expression*), which has been translated into Italian by Rasori, in which the diverse movements of the face and of the body are studied with care and with interest.

In 1839 Dr. Burgess³ studied the causes of the blushing which is produced under the influence of different emotions ; in 1862 Duchenne published two editions of his treatise on the mechanism of the countenance⁴ ; but the importance of his observations and of his theories seems to me to have been somewhat exaggerated by Darwin.⁵ In my *Physiology of Pain* I have tried to reduce the ardour of physiologists to a more judicious moderation.

A great French anatomist, Gratiolet, gave at the Sorbonne a public course on expression, which was published

¹ Charles Bell, *Anatomy and Philosophy of Expression*, 1806.

² Albert Lemoine, *De la Physionomie et de la parole*. Paris, 1865, p. 101.

³ Burgess, *The Physiology or Mechanism of Blushing*, 1839.

⁴ Duchenne, *Mécanisme de la physiognomie humaine ou analyse électro-physiologique de l'expression des passions*. Paris, 1876.

⁵ Darwin, *The Expression of the Emotions in Man and Animals*. London, 1872, p. 5.

in 1865, after the death of the author.¹ He there thus summarises the conception which he had formed of expression—

" It results from all the facts which I have recalled, that the senses, the imagination and thought itself, elevated, abstract as they are supposed to be, cannot be exercised without awakening a correlative feeling, and that this feeling translates itself immediately, sympathetically, symbolically, or metaphysically in all the spheres of the exterior organs, which tell all, according to their own mode of action, as if each had been directly affected."

The germ of a great truth lurks in this theory, but it is almost lost behind a veil woven of metaphysical nebulousities. I hope that the reader will find more light in my chapter on the alphabet of expression.

Piderit published, in 1859, an essay on expression, and in 1867, a scientific treatise on expression and on physiognomy.² Bain, Herbert Spencer, and other psychologists of the positive school have collected some valuable observations on some of the expressions of the human countenance.

But the honour was reserved for Darwin of studying expression by a really new method, and to open up a large field for purposes of comparison by seeking for the first lineaments of expression in the animals which most nearly resemble us.

The great anatomists and physiologists who preceded him had only touched one side of the problem ; they had only concerned themselves with expression in its relation to art and the æsthetic. He, on the contrary, with his wide and comprehensive mind, traced the general laws which govern expression in the whole animal kingdom. His book is one of the most splendid monuments erected by his genius ; and one may say, without exaggeration, that expression, in so far as it is a special branch of comparative

¹ Gratiolet, *De la physiognomie et des mouvements d'expression*, 1865.

² Piderit, *Wissenschaftliches System der Mimik und Physiognomonik*, 1867.

biology, asserted itself as a new science in the work published only in 1872, to which we shall have to recur more than once.

Darwin studied the expression of the principal emotions in animals, in children, in adults. He put comprehensive questions to travellers, to missionaries, to all his correspondents in various parts of the world. Thus he amassed an extraordinary quantity of new facts; then he examined them as with a magnifying glass, submitting them to the evolutionist theory, that he might attempt to discern their mutual relation—the relation of cause to effect. We may differ in opinion from him upon some particular points, we may reject some of his explanations as too rash, but we must always admire the width of the horizon which was opened to us by the publication of his book.

Scarcely more than two centuries elapsed between the work of Dalla Porta and that of Darwin, and yet what a gulf between the two methods! We seem to be reading books written in two different languages! On one side, divination, cabalism, some poor thoughts floating in an ocean of hazardous statements—fortuitous coincidences. On the other, few statements, many doubts; but what certainty of method, how open the look into the future! There we have a fantastical world, where we can seize nothing because all is clouded and phantom-like; here we step on the solid earth of nature, and we enter the true path of science. We shall perhaps have to move onwards during the ages; but we shall never have to return beyond this point and strike a new path.

Still the new physiognomy could not satisfy the crowd which had been so long gorged with amusing fooleries and graceful enigmas. Even in this century books have continued to be published, which, with every appearance of seriousness, while claiming to be scientific works, preserve a strong odour of judicial astrology, or, at least, of sentimental physiognomy.

I will cite as a model of the kind the *Traité complet de physiognomie*, by Lepelletier de la Sarthe, where vain pomp of form vies with emptiness of content. And the author was a doctor.

It is almost the same thing with the two manuals which the celebrated *Encyclopédie Roret* has devoted to the study of the physiognomy—the *Nouveau Manuel du Physiognomiste et du phrénochologue*, Paris, 1838, and the *Physiognomiste des Dames*, Paris 1843. The first of these volumes begins with a lie, for it is given as a posthumous work of Lavater and Professor Chaussier; the second is offered more modestly as written by an amateur.

Thoré published at Brussels, in 1837, a little Dictionary of Phrenology and Physiognomy, the erudition of which is drawn at hazard pretty well universally, now from old, now from modern times; but on the whole it is not a contemptible work, and good articles are found in it.

We must distinguish from these compilations some Italian works. Povi Polli, whom we lost recently, had published a thesis, entitled *Essay on physiognomy and pathognomy* (Milan, 1837, with six plates). This book, it is true, is completely forgotten to-day and unknown beyond the Alps; but it does not merit this oblivion. It abounds with excellent observations, especially in the part devoted to the physiognomy of the sick, and it is written with juvenile ardour.

Filippo Cardona, in his volume, *Della Fisionomia* (Ancona, 1863), commits the fault of writing in a solemn style, which smells mouldy and rancid a mile off, and which is especially out of place in a scientific book. This book has also the fault of being badly constructed, without order and unscientifically; but it is full of wholesome erudition, and here and there sparkles with wit and humour.

Mastriani has treated more or less directly of physiognomy in two works, *Notomia Morale* (Naples, 1871, 2nd edition) and *L'uomo dinanzi alla Corte d'Assise*.

In this historical sketch I by no means claim to have cited all the authors who have written on physiognomy, but only to have sketched in broad lines the evolution of this science which, after wandering in the heavens and on the earth, has to-day recently returned to its point of departure—that is to say, to the pure sources of nature.

To-day we must clearly distinguish the expressive movements of the muscles from features, the anatomy and forms. We have thus on one side a study of the human countenance, which is associated with anatomy, with anthropology, and, for its application, with all the plastic sciences; and, on the other side, a study of expression, and of expression in relation to psychology, to comparative ethnology, and the applications of which interest in turn painter, sculptor, and actor.

My book proposes modestly to restore to anthropology and to psychology that which belongs to either by right, and to make known the positive documents which we possess to-day on the human countenance and on expression. I shall esteem myself happy if I am able to enrich by my observations the treasury of facts secured to science.

CHAPTER II.

THE HUMAN FACE.

SOON after birth, when our eyes have already the power of sight, but do not yet perceive, the first object which presents itself to the yet virgin pupil is a human face. When in our last hour our gaze wanders in the supreme anguish of the death agony, our eyes most greedily seek a friendly face on which to rest ere they are closed for ever. The human face, on which can be painted an immense love or an eternal hatred, a sudden sympathy, or an invincible repugnance, is for us the most interesting thing in the universe. All the libraries in the world would not suffice to hold the thoughts and the feelings which the human face has awakened in man since this poor intelligent biped has trodden the soil of our planet. Religion has made it a temple of prejudices and of adoration; there justice has sought the trace of crimes; thence love has gathered its sweetest pleasures; finally, science has found there the origin of races, the expression of diseases and of passions, and has there measured the energy of thought. The dictionaries of our languages have gathered together all the fruits of our aspirations, our studies, and our researches, superficial or profound. Art has represented it in all its infinite variety and mobility of expression; the first artist, who with flint style sought to trace some lines on the bone of a reindeer or a stag's horn, produced with a circle and three or four points a coarse sketch of a human face.

This universal cult of the human face is fully justified.

In it we find assembled, in a small space, all the organs of the five senses, nerves sufficiently delicate, muscles sufficiently mobile to form one of the most expressive pictures of human nature. Without words our face expresses joy and grief, love and hatred, contempt and adoration, cruelty and compassion, delirium and poetry, hope and fear, voluptuousness and bashfulness, every desire and every fear, all the multiform life which issues each instant from the supreme organ—the brain.

Many centuries before science had collected the materials of our observations, the necessities of social life had taught us to observe the human face, to read there the thoughts of the mind and the feelings of the heart. Thence was born an empirical art without rules and without method, which was transmitted from father to son, the inheritance of a rough experience.

Some anecdotes, collected by Lavater, may give an idea of this physiognomical art, which in different degrees is possessed by all men born under the sun.

The father of a young virtuous man, who was about to undertake a distant journey, said to him as he bade farewell : "All that I ask of you, my son, is to bring me back the same face."

"At what do you value my face?" a stranger asked of a physiognomist. The latter naturally replied that it was not an easy thing to value.—"It is worth 1500 crowns," replied the other ; "for this sum has just been lent me on my face by one who did not know me."

A friend of the Count T—, who lived at W—, one day entered his house with a face which he sought to make gay and serene. After having finished the business which had brought him he wished to retire.—"I shall not let you go out," said the count.—"That is a strange idea," replied the friend ; "it is very necessary that I should go."—"You will not leave my room," replied the count, locking the door.—"In Heaven's name, why do you

act thus?"—"Because I read in your face that you are meditating a crime."—"Who? I? How can you believe me capable?"—"You are meditating an assassination, or I understand nothing."—The other grew pale, and confessed that the count had guessed rightly. He surrendered to the latter a pistol which he was keeping hidden, and told him a sad story. The count was generous enough to draw his friend from the situation which was about to lead him into crime.

However, all that the world generally knows of the human face is but a confused mass of vague notions for which language could with difficulty find expression.

Try to describe to some one the anatomical or expressive features of a face which you know well; you will see how difficult is the task. And yet to have seen a man enables us to distinguish him from the millions of other men who inhabit the globe. This is because to see and to render an account of what one has seen are two very different things. In looking at a face we note rapidly, by a sort of inner shorthand, the most expressive and the most characteristic features. We keep this shorthand portrait in our minds, and thanks to it we distinguish each other, and it suffices us for the ordinary purposes of life. Sometimes we only remark a single feature, the most salient, and from this single feature we derive a name. The whites give the name of black to all the people of Africa and Melanesia because a complexion so different from their own immediately strikes their attention. In the same manner we speak of a one-eyed man, a long-nosed man, a thick-lipped man; we speak of stupid, of libidinous, of beautiful, or ugly faces, although in addition to these characters faces present many others which complete their individuality.

All parts of the face are not equally important in distinguishing men one from another. De Rubeis has demonstrated this in a few words with complete satisfaction

in his *Treatise on the Reproduction of the Face*, which we have already quoted in our first chapter.

There are two distinctive characters of the face—the one essential, the second accessory. The following hypotheses will make clear what constitute the first.

"You have a friend whom you see very often, who is a frequenter of your house. Let us suppose that he has concealed part of his face with a mask, so that the lower lip, the forehead, and half of the cheeks are hidden. The rest—that is to say, the eyes, the nose, and the upper lip—remains uncovered. Although the greater part of the face is thus hidden, the face is at once recognised, because the distinctive characters are visible.

"On the other hand let this friend remove his mask; he has his head arranged in the ordinary way, and he only puts before his face a little black mask, which reaches from the middle of the forehead to the middle of the nose, covering the space occupied by the eye orbits. Then his friends no longer recognise him, especially if he has changed the shape and colour of his ordinary clothes.

"Thus the part of the face which reaches from the bone of the nose to the middle of the forehead, and which is situated between the two temples, is the *essential distinctive character* of the face, and the part which comprises the cheek bones and the bottom of the nose is the *accessory distinctive character*."

The mistake of ordinary observers is not only to take two or three characteristics as a shorthand portrait of all faces, but also to confuse the form or anatomy with a very different thing—movement or expression. This second capital error has slipped into every treatise on physiognomy. It is only quite recently that anatomy has been separated from expression, and that the two things have been studied apart. We shall faithfully respect this fundamental distinction in this work.

One man has little short-sighted eyes, a long and crooked

nose, a big mouth awry. Another has large beautiful eyes, a Grecian nose, an admirable mouth. Still it may be that both laugh alike, and express love and hatred in the same manner. They differ in their anatomy; they resemble each other in their physiology or in expression.

We do not wish to give here an anatomical or an æsthetic treatise on the human face; we will only say so much as it is necessary to know before entering on the study of expression, which is the most important and the most original part of our work. Decomposing by analysis all the elements which we meet in a living human face, without submitting it to the analytical operation accomplished with the scalpel, we can prepare the following list—

ANATOMICAL AND EXPRESSIVE ELEMENTS OF THE HUMAN FACE.

<i>Size of face and skull and their mutual proportions.</i>	<i>Nose.</i>
<i>Length and width of face and their relative proportions.</i>	<i>Mouth.</i>
<i>Situation of the different parts of the face.</i>	<i>Chin.</i>
<i>General form.</i>	<i>Ears.</i>
<i>Colour.</i>	<i>Teeth.</i>
<i>Forehead.</i>	<i>Hair and beard.</i>
<i>Eyes, eyebrows, eyelids, and eyelashes</i>	<i>Spots.</i>
	<i>Wrinkles.</i>
	<i>Different or expressive movements.</i>

Each of these elements is decomposed in its turn into secondary elements, as we shall see in the following chapters.

From all these elements taken together we can make certain determinations as to the successive epochs or accidents of life.

<i>Sex.</i>	<i>Race and paternity.</i>
<i>Age.</i>	<i>Different sorts of beauty.</i>
<i>Hea'th or disease.</i>	<i>Moral character.</i>
<i>Diverse alterations, traumatic or pathological, suffered in the course of life.</i>	<i>Position in intellectual rank.</i>

If by means of a more precise and scientific formula we desire to reduce the possible judgments on the human face to a small number, they can be given as five—the *physiological* verdict, the *ethnological*, the *aesthetic*, the *moral*, and the *intellectual*. The ethnological and aesthetic verdicts are founded almost exclusively on anatomical characters; therefore we shall speak of them briefly in the fifth chapter of the first part. On the contrary, the physiological, moral, and intellectual depend on expression more than on anatomy; therefore we speak of them in the second part.

In theoretical works on the art of drawing, certain rules are found which teach approximately the relative average proportions of a human face which is beautiful, or at least regular. The ancients drew these rules from Vitruvius, the moderns from Albert Dürer. After Dürer the works of classical antiquity were studied, and from them it was sought to deduce the aesthetic laws of human morphology. Many artists, in preparing the canvas on which to paint a portrait, begin by tracing an oval, and inscribing in this a cross. Then they divide the height into four parts, each of which is equal to the length of the nose; the width into five, each of which is the width of the eye. But Camper remarks with much justice that proportions vary infinitely between one individual and another, and that these little differences are precisely that which constitutes originality.

As we are not here writing a book on art, but a book on anthropology and psychology, a few words on the general form of the face will be enough. One of the most important characters of a human face is the possession or non-possession of prominent jaws, thick lips, and receding forehead. In the first case the face is said to be *prognathous*; it is the type met with in negroes, the Australians, and some Papuans. In the second case the face is *orthognathous*; this is the face of all the higher races. Isidore Geoffroy

Saint-Hilaire gave the name of *eurygnathous* to a third type where the cheek-bones are very prominent, and which is found in the Chinese, the Japanese, and in the different branches of the Mongolian and Turanian races. This classification relates rather to racial progression than to beauty, because it corresponds to a particular development of the brain and of the face. If only the middle part of the face is taken into consideration there are two principal forms: the one developed from behind forwards and rising in the median line; the other developing transversely, in which the sides are prominent and the middle flattened. The first form is found among Europeans, the second among negroes, and still more among Mongols.

There are long and there are short faces. The first are more frequent among the Aryans and the Semites, the second among the Mongols. To our ideas the perfect face should form a beautiful oval. We shall enter more into details on the proportions of the face when we treat, in the following chapters, of the features considered separately. The colour of the skin is one of the most striking and general features which impress us in a human face, and thence we judge as to race, sex, age, and health. The colour of the skin arises from the pigment deposited in it, on the manner in which the blood is distributed, on certain characters of the epithelium, and of the deeper tissues which give its particular hue.

Broca, in the *Anthropological Instructions* published by the Anthropological Society of Paris, attempted to reduce to a small number of elementary hues all the colorations of the skin which he made correspond to as many numbers. The same table serves for the hair. All those who have wished to make use of this table of colorations to define the colour of a human skin have experienced great difficulties. For my part I have tried to apply it in the study of the Lapps, and I have had to give it up completely. The principal reason is that the skin is much more transparent than the

paper on which Broca has spread his tints. Two colorations cannot be compared, one of which arises entirely from reflection, and the other is in part transmitted and in part reflected. Add to that subjective errors, which in the case of colours are not slight.

The table of the Anthropological Society of Paris is in appearance scientific and precise : in reality it is as inexact as the old division into white, red, yellow, and black, according to which the whites would belong to Europe, the red to America, the yellow to Asia, and the black to Africa. Such a method is to cut the Gordian knot, like Alexander, not to untie it. I believe that we arrive very near to the truth in admitting for the human skin three tints—white, black, and the colour of dried bean (*savé secche*).

White skin is met with among nearly all the Aryans and Semites, and among many Polynesians, who are neither Malays nor Papuans, and have probably a common origin with ourselves. The negroes, the Papuans, the Australians, some tribes of India, and the Negritoës, have black skin. All other peoples of the earth are of a dried bean colour. If any one will take the trouble to gather beans of different sorts, and of different degrees of dryness, he will have all the tints of the so-called yellow and red races, who in fact present now the colour of raw clay, now of baked clay, now of *café au lait*, finally of all the varieties of chocolate.

It may seem at first sight an empirical and rough method of procedure when we compare the colour of the human skin to that of a fruit or a food ; but in fact, since we have to deal with subjective notions, a much more precise idea of a colour is conveyed by saying that it resembles that of dried beans than by denoting it by the term, olive-coloured, earth-brown, or blackish-yellow. Observe also that under every word there is, as its etymology indicates, a comparison with objects. For the rest I should like to point out the evidence for my statement. Several travellers have spoken of the colour of the skin of the Negritoës,

among others Professor Semper and Dr. Crawford. The former said they are *deep copper brown*, the latter that they are of the colour of *over-burned coffee*. Any one who is acquainted with coffee will have a much clearer idea in the second than in the first case.

In the colouring of the human skin there is one thing which has not attracted sufficient attention from ethnologists hitherto. A single adjective, however precisely and happily chosen, cannot characterise this coloration exactly, because it results from the superposition of two colours, and most frequently from a sort of black or very dark brown dust deposited on a ground of dried bean. I have studied this aspect of the skin in the Tobas, the Mocovis, and the Matacos of South America ; but, after all I have collected from the lips of travellers, I believe that we may add to these many peoples who vary between black and white without being one or the other.

CHAPTER III.

THE FEATURES OF THE HUMAN FACE.

THE FOREHEAD—THE EYES, EYEBROWS, AND EYELASHES—THE NOSE—THE MOUTH—THE CHIN—THE CHEEKS—THE EARS—THE TEETH.

HAVING studied the human face in its general form and character, we have now to proceed to the analysis of its features, and examine them singly.

If we consult ancient and modern authors we shall find plenty of physiognomical guesses, mingled with a very scanty observation of facts—a singular contrast, which well attests the poverty of science and the fertility of human invention. The most obscure physiognomist offers us a hundred formulæ, each more uncertain than the other, for estimating character and intelligence from the features of the face; while serious anthropologists have scarcely touched on the subject, occupied as they have been with the skull, which seemed to them to contain the most profound secrets of human nature. Between the physiognomists and the anthropologists are ranged the artists who have studied the face from the æsthetic point of view, and have formulated their opinions according to personal taste or the tendency of the school to which they belonged.

The Forehead.—After the eye the forehead is the most faithful interpreter of the intelligence. Many centuries before there was any study of morphological rank according to the evolutionist scale, the wide and lofty brow was universally considered beautiful, the low and receding brow, ugly. This appreciation absolutely conformed to

nature, since the former was peculiar to the more intelligent races; while the latter characterised the inferior races, and an intelligence of a low order. In addition to its proportions relatively to the other features of the face, the forehead gives us other secondary characters which vary with racial rank in the human family, with sex, or with different periods of life. The large development of the superciliary arch denotes an inferior rank in the order of races, while it is at the same time a distinctive mark of the male sex.¹

A narrow and receding forehead, with enormous superciliary arches, unites the lowest racial characters, and is found especially among the inferior types of the Papuan races. In women (at least among the higher races) the superciliary arches are but slightly marked, or completely absent; the forehead is narrow, with very marked protuberances, these being also characteristic of the heads of children.

Another very constant type of feminine forehead is one which rises vertically and inclines abruptly towards the crown, with a very accentuated angle. On the other hand, in the male head the curve is an unbroken line from forehead to occiput. The forehead of the child is above all distinguished by the large development of protuberances.

The anthropologists have little beyond this to tell us of this feature; the artists say still less. Among them we will only quote the great Leonardo, who distinguished between three types of brow—the flat, the concave, and the convex—and our own Cardona, who completed this distinction in his commentaries. He tells us that the first type, peculiar to ruddy faces, was for the commentators of Aristotle and for Porta an indication of an excellent natural disposition, and that the second is not a great honour to its possessor,

¹ Mantegazza, *Dei caratteri sessuali del cranio umano.* Archi io per l'Antrop., vol. ii. p. 11.—*Studii antropologici sulla Nuova Guinea.* Archivio per l'Antrop., vol. vii. p. 137.

more especially when little developed in height and towards the crown. The third, when neither brazen nor insinuating, testifies to a harmony of faculties, and frequently to musical ability.¹

The lucubrations of the physiognomists on the value of different types of brow present a contrast by their abundance. Here is an example of them—

“Those with large brows are cowardly and timid, like oxen who have also large brows. Those with small foreheads are very ignorant, by their resemblance to pigs. But by small I mean narrow, for the pigs to which Aristotle alludes in his *Physiognomy* have very narrow foreheads.

“A brow developed in length indicates good sense and plenty of faculty for the sciences.

“The square forehead, of medium proportions relatively to the face, denotes a magnanimous man by its resemblance to the brow of the lion.

“Those with rounded foreheads are passionate, and it is a sign that they are inflated with presumption.

“Those with rounded and lofty foreheads are stupid, because they resemble the ass.

“The forehead which is not flat betokens the sagacious man, because he resembles the dog.

“‘The smooth forehead denotes a quarrelsome man,’ said Rasi. ‘I believe by analogy with the dog, who is quarrelsome, and has no wrinkles in his forehead.’”

And so on for a number of pages. The author reviews in turn foreheads which are straight, then neither smooth nor rugged, calm, dreamy, medium, calm and dreamy, lofty, low, austere, sad, joyful, etc., and for nearly each one he gives us a human and an animal face to demonstrate the truth of his parallels and his opinions.²

Niquetius believed the forehead to be the door of the

¹ Filippo Cardona, *Della Fisonomia*. Ancona, 1863, p. 174.

² Gio. Battista Dalla Porta, *Della Fisonomia dell' huomo*. Padova, 1627.

soul and the seat of modesty, *animi janua, pudoris sedes*, and with his accustomed erudition he quotes Cicero, *De petitione Consulatus*;

and Martial:

. . . “perfricuit frontem posuitque pudorem;”
and Isaiah:

“*Scivi enim quia durus es, et nervus tuus ferreus et frons tua aerea;*”

and Ecclesiasticus:

“*Anima irreverenti et infrunitæ ne tradas me;*”
and Terence:

“*Mitte jam isthæc, exporrigie frontem;*”
and Plautus:

“*Ego te porrectiore fronte volo tecum loqui;*”
and finally Pliny:

“*Est enim frons tristitiae, hilaritatis, clementiae et severitatis index: nullibi magis quam in oculis et fronte pudor conspicitur.*”¹

The quotations of the learned Jesuit show us once more that orators, poets, and prophets placed the principal seat of thought in the anterior lobes long before a cerebral physiology had even been thought of.

Mgr. Giovanni Ingegneri, bishop of Capo d'Istria, proceeds to diagnoses of the subject of the forehead which are amusingly subtle. For example, a brow which is neither smooth nor rugged is a sign that a man loves justice.²

The Bolognese Ghiradelli devotes the *Deca seconda* of his work³ to the study of the brow, *which is the most secret and noble part of the physiognomy*. He is even still more prolific of quotations and cabalistic lucubrations than the

¹ R. P. Honorati Nicquetii, etc., *Physiognomia humana*. Lugduni, 1648, p. 176.

² *Fisonomia naturale di Monsignor Giovanni Ingegneri*. Padova, 1626, p. 19.

³ Cornelio Ghiradelli, *Cefalogia Fisnomica*. Bologna, 1672, p. 78.

Jesuit Niquetius. To give an idea of the pompous style, so resonant of this seventeenth century, with which he discourses of the forehead, I will cite a single period.

"Among all the parts of our body the forehead shows itself the most docile in revealing the inner affections of the soul. At the foot of the brow the noble flame of the eyes is constantly burning; by so much the more easily this oracle of the heart is inflamed by curiosity and external knowledge, by so much the more readily may be read there the resolutions decreed in the council of Nature."

Lavater might well say that his predecessors in the study of the forehead had but copied each other, and that they had fallen into vague contradictory arguments, into rigid conclusions destitute of sense. He affirms that he studied the forehead more than any part of the face, because he believed it to be the most important and most characteristic; but he too attempted to compel nature to reply under the constraint of torture, and his laws are guesses which severe science repudiates. Judge if my opinion is too harsh.

1. The forehead is elongated in proportion as the mind is destitute of energy and elasticity.

2. In proportion as it is narrow, short, and squat the character is concentrated, firm, and solid.

3. Rounded contours, with no angles, discover gentleness and flexibility of character. But this, on the contrary, will have firmness and rigidity as the contours of the forehead are rectilineal.

4. Absolute perpendicularity, from the hair to the eyebrows, is a sign of complete lack of intelligence.

5. A perpendicular form, which slopes away insensibly above, announces a reflective mind, profound and decisive thought.

Let us stop here. The ancients, on looking at a forehead, could tell us all sorts of beautiful things. We no longer know anything, and in the first lines which we wrote

on this part of the face was collected well-nigh all the positive knowledge which we possess. It is probable that among the hosts of opinions formed by the old physiognomists, and especially by Lavater, who was a good observer, there lurks some amount of truth. Posterity will be able to discover it by an analytical work of which we are not capable to-day. But it would be labour lost to weary ourselves now with digging into the scoria of the past, when the rich veins of positive psychology are opening up before our delighted eyes.

The Eye.—The eye is so important a part of the face that a complete monograph on this organ would comprise the half of all psychology and the science of expression. But in this first part we must only speak of the anatomical history of the eyes, and not of their expression.

The most striking characters of the eye are its expression, form, position, colour, and the special arrangement of the eyebrows and eyelashes. According to the total effect of these characters we judge whether the eye is beautiful, ugly, eloquent, stupid, expressive, etc.

The size of the eye, as we empirically appreciate it on a first glance and without measurements, does not only depend on the volume of the eyeball, but on the extent to which the opening of the lids allows a greater or less portion of it to be seen.

The eye which is rather large without being prominent is to us the ideal of perfection; a small eye seems ugly to us. This verdict is rational, for the eye being one of the most expressive organs, there is in its power of expression an element of quantity which is not without effect.

Generally the Aryans, the Semites, and many negroes have large eyes; Mongols and many Malays have small eyes.

The form of the eye depends partly on the greater or less convexity of the cornea, but still more on the shape of the orbit, on that of the eyelids, and on the extent to

which these open. We have then to consider round eyes, prominent, almond-shaped, horizontal, or oblique eyes, either sloping up to the nose or to the temples.

In the Aryan and Semitic races, and among the white Polynesians, the eyes are almond-shaped, with the outer extremity very pointed. This forms in our opinion one of the principal beauties of the Semitic women and of those who have a little Semitic blood in their veins, as the Spaniards of Andalusia. This form of eye is also much appreciated in the East, since it is the practice to simulate an elongation of the transverse opening of the eyelids by the use of sulphur or antimony.

Eyes slanting downwards, from without inwards, form one of the characteristics of the Mongols and of some American races. This obliquity is extremely pronounced among the Esquimaux, Buriates, etc. Sometimes among us just the contrary prevails, and the outer angle of the eye is lower than the inner. When this character is accompanied by other aesthetic elements it may constitute a rare and extraordinary beauty, as may be seen in the case of the Empress Eugenie.

Eyes may be ugly if they are too near or too far apart. In the first case, especially, the expression may assume a bestial and very repulsive character.

They may also be very unsightly if they are level with the head, as in some negroes, or too prominent, as in some short-sighted people.

The excessive sunkenness of the eyes in their orbits may depend either on the very overhanging roofs of the latter, or on great emaciation. In either case they may give a ferocious or a sad character.

The colour of the eyes varies greatly both among different races and among different individuals of the same race. We generally define it in a summary fashion by a single word, although in reality it is constituted by the various hues of the iris, and by the influence, greater or less, of that

of the pupil, which is always black. The iris includes two concentric zones of different colour, and nearly always presents some striations of a third hue. Hence the difficulty of reducing all the colours of eyes to a small number of types. We call eyes which are deep chestnut, black; but such a thing as a really black iris does not exist anywhere.

We may establish a sufficiently rough classification by distinguishing between grey, blue, green, and brown. The Anthropological Society of Paris have admitted for each of these fundamental colours five shades, which they have figured in a table, intercalated in the little volume of their *Instructions Anthropologiques*. But the employment of this table is beset with enormous difficulties, since the terms of comparison chosen by Broca are inexact. In the table the colours are opaque—that is to say, the tints are reflected by the white paper on which they are spread. The colour of the eye, on the contrary, is the result at once of reflected and of transmitted rays. Thus practice has shown me that it is better to designate the colour of the eye by the terms in use in ordinary language. To arrive approximately at a scientific classification we ought to have a series of artificial glass-eyes, like those adapted to the one-eyed to conceal their infirmity.

While studying with my friend Sommier the colour of the eyes of the Lapps, I became convinced of these difficulties, and was obliged to give up using the table of the Anthropological Society. We were able to distinguish in the iris of the Lapps at least fourteen different and graduated shades. Here is the list—

	Men.	Women.
Dark chestnut brown	2	4
Chestnut brown	8	6
Light chestnut brown.....	10	4
Turquoise blue	12	4
Light Turquoise blue	2	—
Azure grey.....	13	—

	Men.	Women.
Light sky blue.....	1	1
Grey.....	3	4
Grey brown	7	5
Light grey	2	—
Light azure grey	1	1
Yellowish grey	2	—
Greenish grey.....	2	—
Green	1	—
 Totals.....	 66	 29

Grey, green, or blue eyes are nearly always associated with the hair and complexion belonging to the blonde type; while brown or dark eyes generally go with the brunette type. Sometimes, however, blue eyes are found with black hair, or black eyes with fair hair. These two contrasts are very pleasing, because rarity is an element which exercises great influence in our æsthetic judgments.

Sometimes it happens, but very rarely, that the two eyes may be of different colours. Every one knows the red colour of the eyes of the albinos; it arises because, from a deficiency of pigment, the iris presents the coloration of the blood vessels.

The subjective element prevails in our estimation, whether favourable or unfavourable, of the colour of the eyes, and in this respect there are many national and individual tastes. I shall never forget the eloquence with which a very learned Norwegian philologist and ethnologist expressed to me his enthusiasm for light eyes (he meant grey, light, or sky blue), and his contempt for dark eyes. The former, he said, are expressive; they can translate the emotions: black eyes, on the contrary, express nothing; they are but *pieces of coal!* I held my tongue and inwardly made some sad reflections upon the solidity and certainty of our æsthetic judgments.

We associate with the colour of the eyes many æsthetic, psychical, traditional, and other elements, according to which dark eyes seem to us more adapted to express

passion and sensibility; blue or grey eyes to express gentleness and goodness. Generally, however, we prefer very accentuated shades; other things being equal, we find turquoise blue or very brown eyes more beautiful than grey eyes, greenish, or of uncoloured colour (*colore incoloro*), as one of my old professors of natural history expressed it.

Eyes have a variable brilliancy which contributes much to modify their expression. The eye of one who is laughing, speaking, or energetically thinking, is very bright; the eye of a stupid, weak, or sick man has little brilliancy; that of the dying is sometimes almost extinct. This brightness deserves attentive examination, for it is one of the most important and most obscure elements in the study of the eye. For the moment we must content ourselves with saying that it depends at once on the structure of the cornea, on its varying convexity under the influence of the ocular muscles, on the humours secreted by the eye, and above all on the veil of tears which bathes its whole exterior surface.

The eyebrows, the eyelids, the lashes, are only secondary elements; but they serve to modify the physiognomy.

The eyebrows may be thick, very bushy, or scanty, to the point of being scarcely visible. Generally we consider eyebrows which are moderately thick, well-arched, well-lined, and having hairs of uniform length, as beautiful. We prefer them more accentuated in the man, more delicate in the woman, because these two types represent sexual differences which we observe in nature.

When they are too full, especially if they meet, they give to the face an expression of energy which may amount to harshness and ferocity. When, on the contrary, they are almost invisible they take much of the expression from the eye and constitute an element of ugliness. With age the central hairs of the eyebrows become long, and even eventually cover at times a part of the eye, forming thus a sort of bristling bush which gives to the face either a

savage or a venerable aspect. Lavater attributed great importance to the eyebrows as a criterion of character.

"Often the eyebrows in themselves express the character, as is witnessed by the portraits of Tasso, Leo Battista Alberti, Boileau, Turenne, Le Fèvre, Apelius, Oxenstiern, Clarke, Newton, etc.

"Eyebrows gently arched accord with the modesty and simplicity of a young maiden.

"Placed horizontally and in a straight line they correspond with a virile and vigorous character.

"When they are horizontal for a part of their length, and short for the other part, strength of mind is united with frank goodness.

"I have never seen either a profound thinker or a firm and judicious man with thin eyebrows situated very high and dividing the forehead into equal parts. Thin eyebrows are an infallible sign of apathy and flabbiness.

"The nearer they approach the eyes the more serious, profound, and social is the character. This loses in strength, firmness, and boldness in proportion to the height of the eyebrows."

In spite of my profound scepticism towards all physiognomical statements which are based on anatomical characters and not on expression, I confess that I have always found the guesses of Lavater relative to the eyebrows exact in the circle of my own experience. They are so mobile, and they are bound by so close and intimate a dependence with the eyes and with the intelligence, that their morphology, studied in a single race and *cum rationabile obsequio*, might very probably furnish the elements of good psychological diagnoses.

Buffon likewise wrote—"After the eyes, the features which contribute most to mark the countenance are the

eyebrows. As they are of a different nature from the other parts, they are the more apparent for this contrast, and strike more than any other feature; the eyebrows form a shadow in the picture which brings its colours and forms into relief."

The eyelids may be more or less long, wide, fleshy, open, etc.; but one of their most important characters is furnished by the lashes which beset their mobile borders. The lashes may be short, irregular, or, on the contrary, long, regular, and finally bristly. We think long lashes, which throw a shadow on the cheeks, beautiful; these long lashes are one of the most charming attractions of the Andalusian women.

The Nose.—In recent times no one has studied the nose better from a morphological point of view than Topinard.

This feature, nearly immobile, is still very important as an ethnical and as an aesthetic element of the face. One nose is enough to discover the race of its possessor, another to spoil the most beautiful face. Thus the artists were right in calling it *honestamentum faciei*, and Lavater perhaps was not wrong when he said that a beautiful nose is never associated with an ugly face. It is possible, he adds, to be ugly and yet to have beautiful eyes; but a regular nose necessarily exacts a happy harmony of the other features. Many beautiful eyes are seen for one perfectly beautiful nose.

For the illustrious Swiss physiognomist a perfect nose must unite the following characters—

- (a.) Its length must be equal to that of the forehead.
- (b.) It should present a slight depression near its root.
- (c.) Seen in front, its arch should be wide and with its sides almost parallel; but this width should be a little more noticeable near the middle.
- (d.) The point of the nose must neither be sharp nor fleshy, the lower contour precisely outlined, neither too narrow nor too wide.

(e.) The flanks of the nose must be distinctly seen from before, and the nostrils delicately shortened below.

(f.) In profile the lower part of the nose should only be one-third of its length.

(g.) The nostrils should be more or less pointed in front and rounded behind; they must be lightly curved, and divided equally by the profile of the upper lip.

(h.) The sides of the nose will form a sort of wall.

(i.) Above it will almost join the orbital roof, and at the side of the eye it will be at least half an inch wide.

Many of these characters are questionable. Our æsthetic judgments on the nose are nearly always very correct, because they are connected with the most imperious laws of evolution and of organic morphology.

We, belonging to the higher races, regard as ugly all noses which approach that of the ape, snub, flattened, or very small noses, with nostrils failing in parallelism, and the section of which represents the figure eight. In this respect we even sacrifice the laws of geometry to our atavistic prejudices; we should consider a woman beautiful who had an excessively large nose, rather than pardon a snub one. In Italy we call a large nose aristocratic (especially if it is aquiline), perhaps because the long-nosed conquerors, Greek or Latin, subjugated the autochthonous small-nosed population.

Naturally we look upon all noses which violate the laws of symmetry, or the harmonious proportions of the other features, as ugly. A nose cannot, of course, be beautiful if it is too large or too small, or if it is awry.

The development of the nose in different races is either antero-posterior or transverse, forming thus two extreme types, the aquiline and the flat nose. The long nose belongs generally to all the peoples of Europe, to the white Polynesians, and to the Americans of the North; the negroes and the Mongols have short noses.

The nose may be long and wide; it may be so short and

flattened, that a ruler might be so placed as to rest at once on both cheeks without touching the nose. This is the case with the Esquimaux. The aquiline nose may have one or two protuberances, and the small nose may have the tip turned up, which always gives to the whole face a capricious and impertinent expression. This is the *nez retroussé* so frequently met in France. The Roumanians have a proverb—"A tip-tilted nose, one person in a house, and no more."

Carus distinguishes between five sorts of majestic noses: the *thin*, the *long*, the *hooked*, the *wide*, and the *fleshy*.

Leonardo had formerly indicated more subtle distinctions.

"The junction of the nose with the eyes may be either concave or straight. . . . Noses are of three sorts: straight, concave, or convex. There are four varieties of straight noses: the long, the short, with the tip high, with the tip low. Concave noses are of three sorts, according to whether the concavity is found in the upper, the middle, or the lower part. Convex noses are also of three sorts, for the convexity may be at the top, in the middle, or at the bottom; the prominent parts between which the nose is situated may likewise be straight, concave, or convex. To readily retain the recollection of a face we must first compare in many faces the mouth, eyes, nose, chin, throat, neck, and the shoulders, and make comparisons. Noses are of ten species, according to whether they are straight, arched, hollowed, elevated above, or below rather than in the middle, aquiline, snub, round, or pointed. These distinctions only hold good for noses seen in profile. From the front, there are eleven forms of noses: they may be equal, thick in the middle, thick at the point and thin at the junction, they may have wide or narrow nostrils, high or low, with the apertures laid bare or hidden by the point."

Leonardo, however, was unable to distinguish with precision between all the possible varieties of nose.

In a scientific study it will always be necessary to consult

the programme traced by Topinard, who, I believe, has not forgotten a single important morphological element—¹

Maximum height	Transverse index.
Maximum width	
Maximum prominence	Antero-posterior index.
Ridge	Angle of inclination. Rectilinear. Broken or uneven. Convex (aquiline variety). Concave (snub variety). Steep.
	Form Curved. Flat.
Lobe	Distinct (pinched, trilobed). Indistinct. Passing the nostrils.
Flanks	Approximate. Diverging.
Base	Form Elliptical. Rounded. Special.
Nostrils	Principal axis Small. Large. Sensibly downwards. ,, forwards. ,, backwards. ,, externally. Direction of Antero-posterior. Principal axis Transverse.

With the aid of this analytical table I was able even to classify the nose of Thiébaut, the elder of the two Akkas of Miàni, the tip of whose nose was lower than the two lobes, while the base was very wide.²

One character omitted in the table is the angle which the root of the nose makes with the forehead. It is very

¹ Topinard, "De la Morphologie du Nez," *Bulletin de la Société Anthropol.*, 2^e. série, vol. viii., 1873.

² Mantegazza e Zanetti, *I due Akka del Miani*. Archivio per l'antrop., etc., tomo iv. p. 137.

marked in the Australians and the Papuans: it is zero in the so-called Greek nose, a conventional rather than an actual form, which is found in all the statues of the ancient Greek sculptors. This angle is much less pronounced in Mongols and Arabs.

The muscles which move the nose are almost atrophied in man. Thus they give only a very feeble movement, and only on rare occasions, notably in asthma, when the muscles are called on, even the feeblest, to aid in respiration. Besides these pathological cases the flanks of the nose dilate and contract very visibly in passion and in pleasure. It seems that these movements are more marked in the inferior races, and among men of the higher races who are much addicted to voluptuousness.

I have remarked that the tip of the nose is nearly always deflected towards the right, and I have proposed to explain the fact by attributing it to the custom of wiping the nose with the right hand. However, my theory has need of confirmation.

The Mouth.—If the eye is the most expressive part of the face, the mouth is the most sympathetic. The yearnings of love and the passions of voluptuousness converge here as to their natural centre. In fact, as we shall see better in the second part, the eye is the centre of the expression of thought; the mouth is the expressive centre of feeling and of sensuality.

Tommaseo was then completely right when he wrote in his *Moral Thoughts*: “It was not without reason that the Latins called the whole face of man *os*. The soul dwells in the mouth.”

And Lavater devoted to the mouth a page replete with delicate and sensuous exaltation—

“The mouth is the interpreter and organ of the mind and of the heart. In repose, as in the infinite variety of its movements, it unites a world of characters. It is eloquent even in its silence.

"This part of our body is so sacred to me that I scarcely dare to speak of it. What a subject of admiration !

"What a sublime marvel in the midst of so many other marvels of which my being consists ! Not only does my mouth breathe the vital air, and fulfil the functions which are common to me with the animals, but it serves to form speech ; it speaks, and will still speak, when it can never open again.

"Readers, expect nothing of me on the subject of the most active and the most expressive of all my organs ; this undertaking is above my strength.

"Humanity ! how art thou degraded ! What will be my ecstasy in the eternal life when my eyes shall behold in the face of Jesus Christ the mouth of divinity—when I shall utter this cry of joy, 'I too have received a mouth like that which I adore, and I dare to pronounce the name of Him who has given it to me ! Life eternal, to think of thee is already happiness !'

"I conjure our painters and every artist whose mission it is to represent man—I conjure them with all my might to study the most precious of our organs in all its varieties, in all its proportions, and in all its harmonies."

Here is a sensuous mysticism which recalls to me the hysterical and religious ecstasies of Saint Theresa. Lavater had a very feminine nature, and was profoundly religious.

The mouth has not only fascinated Tommaseo and Lavater, both of them visionaries in sentiment, although very different from each other ; it equally fascinated Herder, the creator of the philosophy of history. Hear him—

"It is from the mouth that the voice issues, interpreter of the heart and of the soul, expression of feeling, of friendship, and of the purest enthusiasm. The upper lip translates the inclinations, the appetites, the disquietude of love ; pride and passion contract it, cunning attenuates

it; goodness of heart reflects it, debauchery enervates and debases it, love and the passions incarnate themselves there with an inexpressible charm."

Reader, without being a great man like those whom I have just cited, compare the two different emotions which two beautiful eyes or a beautiful mouth in a female face awaken in you. In the first case you may be struck with open-mouthed admiration, but in the second you cannot save yourself from loving ardently. The woman whose eyes have awakened our love inspires us with enthusiasm, exalts us, throws us into an intellectual ecstasy; but she whose mouth fascinates us twines us round, binds us, belongs to us already, at least in the irresponsible world of desires. The eye is the azure heaven to which none may attain; the mouth is the earth with its perfumes, its ardours, and the profound sensuality of its fruits.

But let us leave poetry, and re-enter the severe laboratory of anatomy.

Generally all the higher races have a moderately-sized mouth, with the lips rather thin and slightly curved. Even when we oppose Darwinism from the prejudice of the school, or from religious horror, we agree in considering ugly a mouth which recalls our cousins, the anthropoid apes. A mouth is ugly if it is too large or too far from the nose, when the upper lip is a sort of long curtain. Unless we are sensual as some monkeys, we think a mouth with too fleshy lips very ugly, these nearly always going with a prominent snout, or, to speak scientifically, with a *prognathous face*. The extreme thickness of the lips which is noted in nearly all negroes is due to the hypertrophy of the adipose cellular tissue, and to the great development of orbicular muscle; and it is true that this type nearly always coincides with great sensuality.

Lavater wishes (and I believe rightly) that we should distinguish in a mouth—

- (a) The lips properly speaking, taken singly;

- (b) Their line of junction when the mouth is closed;
- (c) The centre of the upper lip;
- (d) The centre of the lower lip;
- (e) The base of the line of the middle (Lavater uses the term base for the angle perceived when a mouth is seen in profile in a dimly-lighted place, and which throws a little shadow on the lower lip);
- (f) The angles in which this line ends.

As to the general form, Lavater distinguishes three principal varieties—

Mouths in which the upper lip projects over the lower. This is a distinctive sign of goodness of heart (?) Such may also be called *sentimental mouths*.

Mouths in which the two lips advance equally. They are met with in honest and sincere people (?), and may be called *loyal mouths*.

Mouths in which the lower lip projects below the upper, and which may be called *irritable mouths*.

To-day, more ignorant or more sceptical than Lavater, we content ourselves with saying that the excessive prominence of the upper lip is often accompanied with scrupulousness, and that on the contrary a marked prominence of the lower lip generally denotes great firmness of character or obstinacy.

The Chin.—It has been repeated in many books that man alone has a chin, but perhaps it is only true of the skeleton. Still it is beyond doubt that the higher races have a great repugnance to receding and slightly accentuated chins. In reality this is a character of inferiority which is found in very low types of humanity. On the contrary, we think beautiful a rounded or oval chin, tolerably marked in the man, less striking in the woman. Sharply-pointed chins, on the contrary, give the idea of a certain hardness which cannot be associated with grace and kindliness. But these opinions, like all others of the same sort, have no serious basis. It does, however, appear to be evident that, other

things equal, a very prominent chin has the same significance as the prominence of the lower lip, which we have noted above. It is an ethnical character of the English, who are a strong-willed people. "A long experience has shown me," Lavater assures us, "that a prominent chin always denotes something positive, while the receding chin has always a negative signification." Often the energy or feebleness of an individual is only manifested in his chin. But Lavater is not disposed to admit with the ancients that a sharp chin indicates astuteness.

Many proverbs in different languages assign a certain character of kindness to chins which have a dimple in the centre. Lavater declares that his experience has confirmed popular opinion, but I will not take the responsibility of maintaining or contradicting it. It is certain that a dimple thus placed beautifies still more a beautiful face. Therefore Pulci was right when in his *Morgante Maggiore* he thus sums up in a happy line all the good points of a beautiful chin—

" A rounded chin, dimpled and well proportioned."

With two or three adjectives we may always define some form of chin, for it is one of the features least abounding in details. Lavater, for his part, only distinguished between three principal varieties — to wit, receding chins (which I think peculiar to women), those the profile of which is on the same plane as that of the lower lip, and finally the sharp chins which project beyond the lower lip.

Tommaseo has devoted to the chin one of his metaphysical reveries:—"A small chin indicates affection; a long and full chin, coldness; long and retreating, perspicacity and firmness; a dimple in the chin, more grace in the body than in the soul."

The Cheeks.—But slightly prominent in the whites and the negroes, the cheeks are very pronounced in the Mongol race, with whom they constitute one of the most

characteristic features. We have already spoken of their prominence in the Esquimaux; but the Buriates do not differ at all in this respect, for recently my excellent friend Sommier wrote to me from Siberia that he had travelled with a Buriate ambassador, and that, looking at him in profile, he noticed that his cheek appeared above his nose.

To us, people of the Aryan race, too prominent cheeks are always ugly.

The Ears.—This is perhaps the least expressive feature of the face, on one side because it is still less mobile than the nose, and only very rarely mobile at all; on the other side because it is placed in a half-concealed position, where it must be sought before it can be admired or condemned. We must admit, moreover, that the ear, where it is perfect, completes the beauty of the face.

In the æsthetic judgments which we form on the ear, we are again Darwinians without knowing it. We think it ugly if too large, and especially when projecting from the head, when there is no lobe, or if the pinna is ape-like in its upper part. We think it beautiful when it is small, well turned, with well-drawn sinuosities, when it lies closely along the skull, and when it has a rounded and distinct lobe.

Circular, irregular, and square ears are ugly; oval ears are beautiful.

It appears that the lobe of the ear is wanting among several races of Northern Africa (Chaouia, Kabyles).

The Teeth.—When the mouth is closed the teeth are not seen; but when it opens, the teeth are of foremost importance to the face, to which they add a capital element of admiration or horror, of sympathy or repugnance. The most beautiful teeth are not enough to make a man beautiful; but ugly teeth would spoil the beauty of the Venus of Milo herself.

In our higher races we consider as beautiful teeth which are not too prominent, without gaps between them, not

too thick, not too wide, not too long, white or slightly tinted with blue. We think teeth ugly which are prominent, placed awry, irregular, yellow, or far apart.

It is repugnant to all to see a large part of the gum of the upper jaw when the mouth opens. It is a flaw in beauty to have bad teeth; it is like a spot on the sun. Since the hygiene of the teeth is at the same time the hygiene of beauty, good dentists merit a golden statue, or, at least, a place of honour among the principal benefactors of humanity.

An ethnological study on the teeth has yet to be made; it will reveal distinctive characters of great importance.

CHAPTER IV.

THE FEATURES OF THE FACE (*continued*).

THE HAIR AND THE BEARD—MOLES—WRINKLES.

THE hair and the beard are secondary elements of the face; but in many cases they suffice to modify its æsthetic value or to determine the race; they are alone always characteristic of the sex and indirectly of each of the ages of life.

The Hair.—All men on the earth have heads covered with hair. An ethnologist has spoken of a bald tribe on the west coast of Australia, which seem to come from a mixture of Australians and Chinese; but this assertion has need of confirmation.¹ Human hair differs in colour, length, thickness, and by the structure which causes it to take a particular character, and gives it very diverse aspects, even when looked at with the naked eye and without recourse to the microscope.

The palette which nature has used to colour our hair is very rich. The Anthropological Society of Paris has adopted the table of tints which serves them to determine the coloration of the skin; but this scale has the same fault as that employed for the colour of the eye.

From the white of linen we pass to light blonde, to golden blonde, to red, to chestnut, to brown, and to jet black.

If all the peoples of the earth are massed together the

¹ Just as I am correcting my proofs my excellent friend, Professor Giglioli, has made me a present of a photograph which represents a completely glabrous aborigine of Central Queensland.

most widely-spread colour of the hair is black ; it is enough to name the Mongols, the Malays, the Negroes, the American Indians, and the Europeans of the South.

Blonde hair is common in the Germanic, Celtic, and Slave branches of the Aryan race, and in the Finnish branch of the Mongol race. Red is an exceptional colour which is not peculiar to any race, but which may, however, be considered as a variety of blonde ; in fact it is never met with among black-haired races.

Sommier and I, while studying the Lapps, have found chestnut hair to be most common among them. Dark black is very rare, blonde common enough. For the rest here is a more precise table.

COLOURS OF HAIR.

	Black.	Chestnut.			Fair.		
		Deep.	Med'm.	Light.	Deep.	Med'm.	Light.
		Women	2	9	11	6	9
	Men		1	8	9	1	3
						4	6

One colour of the hair is nearly always associated, as we have already seen, with a certain hue of the eyes, and the union of the two characters constitutes one of the most immutable among the ethnical characters which enable us to judge of the purity of a race. For example, when among a people the eyes and hair are constantly black or constantly light, we say that the race is pure. A contrary conclusion is drawn when different hues are found which mingle in different ways. Nevertheless, this ethnological dogma can only be accepted with reservations, since for many peoples we want statistics worthy of faith, and also, because races very remote from each other may have the same eyes and hair.

For instance, will you classify the Japanese and the

Sardinians together simply because they both have black eyes and black hair? The diverse distribution of the pigment is a good anatomical character on which to institute a system for the classification of men, but not to establish a taxonomical method.¹

Topinard, profiting by the innumerable observations collected by Dr. Beddoe, has drawn up a table of human chromatology founded on the colour of the hair and eyes.

	Red and Blonde.	Inter- mediate or Chestnut.	Brown.
23 Danes	78·5 %	17·9 %	3·5 %
400 Walloons...	52·0	22·2	25·2
1125 Scotch Highlanders	45·4	23·9	30·9
90 Irish	45·3	21·2	31·9
654 Normans	33·1	29·2	37·6
1250 Viennese	32·8	25·8	41·4
368 Bretons	20·0	22·7	57·3
518 Ligurians...	17·0	16·0	67·0
163 Northern Jews	14·4	13·3	73·6
233 Southern „	13·5	13·7	73·1
130 Maltese	8·8	11·8	79·3

From this table the following conclusions can be drawn—

1. None of the series examined presents one colour only.
2. The largest proportion of blondes is found among the Danes, then among the Walloons; the largest proportion of brown-haired among the Maltese, the Jews, and the Ligurians.
3. The proportion of brown-haired is the same among the Jews of the North as those of the South.
4. The Bretons are generally brown-haired.

We believe that man, especially among the higher races (Aryan or Semitic), may, outside all ethnical influence, present hair of different colours. Of this we may be convinced without going beyond Italy; for in this country we

¹ Pfaff says that black hair predominates in the extreme zones, and that thus the Greenlanders and the Esquimaux have hair of the same colour as the negroes. But he has forgotten the Lapps.

meet blonde, chestnut, and brown-haired Jews without having any right to explain the fact by mysterious reasons.

It is certain that in Europe, and especially in the large towns, blondes tend to diminish in number. This has been demonstrated in England to the great chagrin of the English. Charnock affirms that this change has asserted itself in Europe for two thousand years. Some seek to explain it by the diet followed in towns, where meat plays a larger part than in the country. Others, on the contrary, explain it by saying that the hygienic conditions, being less good in the large centres of population, tend to make the blonde type, less resistant than the brown, disappear. In my opinion the problem is very complex, and the observations collected do not yet offer sufficient elements to enable us to arrive at a serious conclusion.

Those who desire to study the problem will find in these data a point of departure for more profound and extensive investigations.

Dr. G. Mayr has represented in two cartographical tables¹ the relative frequency of blonde hair, of white skin, and light eyes among the people of Bavaria. It results therefrom, for this region considered apart, that these types are more numerous in the northern than in the southern provinces.

A smaller proportion of light-haired and light-eyed people are found in the towns than in the country.

	Provinces.		Average.	Towns.	Country.
	Northern.	Southern.			
Light Hair ...	68·67 %	38·10 %	54 %	49 %	55 %
Light Eyes ...	73·75	59·60	66	63	67
White Skin ...	92·94	70·73	85		

¹ *Die Bayerische Jugend nach der Farbe der Augen, der Haare und der Haut, 1876.*

Mayr attributes the larger proportion of light hues found in the rural districts to the movement of emigration, which brings a greater mixture of races into the towns. In this mixture the dark races, though less numerous, give proof of a greater reproductive power. It seems to me that other influences also enter into play to determine these differences. Thus, according to Professor Bertillon,¹ it has been ascertained in England that blonde hair is decreasing and tending to dark hair. Now we know that the urban population in England is continually increasing, and that actually 50 per cent. of the population dwell in towns containing 2000 souls, and 38 per cent. in towns of more than 20,000.

Of 100 individuals with fair hair, 38 have blue eyes, 39 grey eyes, and 23 dark eyes. Of 100 individuals with brown hair, 22 have blue eyes, 34 grey eyes, and 44 dark eyes.

Passing from Bavaria to a more northern state, to Saxony, we find on an average per thousand individuals the following figures²—

Eyes.			Hair.				Skin.	
Blue.	Grey.	Brown.	Fair.	Red.	Brown.	Black.	Fair.	Dark.
378	331	288	692	2	296	9	940	60

The dark population then diminishes noticeably, but here, too, it is ascertained that it is maintained more numerously in the large centres.

Of 100 individuals with fair hair, 44 have blue eyes, 35 grey eyes, and 21 dark eyes; of 100 dark-haired

¹ International Congress of Demography held at Paris, 1878: session of July 7.

² D. Geissler, *Die Farbe der Augen, der Haare und der Haut bei den Schulkindern Sachsens.*

individuals, 46 have dark eyes, 29 grey eyes, and 25 blue eyes. These proportions differ very little from those observed in Bavaria.

The observations of F. Korösi at Buda-Pesth on 10,000 Hungarian students show the following distribution—

Skin.		Eyes.				Hair.		
Dark.	Fair.	Black.	Brown.	Grey.	Blue.	Black.	Brown.	Fair or Red.
2,210	7,790	15 4,505	4,490	2,594	2,901	406 4,907	4,501	5,092

In France such exact investigations have not been made into this matter. Dr. Bernard¹ divided the departments of France into two groups, according to the prevalence of the Cimbric race (Nord, Jura, Bas-Rhin, Moselle, Haut-Rhin, Meurthe), or the Celts (Corrèze, Haute-Loire, Aveyron, Indre, Cantal, Ardèche, Dordogne), and found that of a hundred individuals the colours of eyes and hair fall into the following divisions—

	Hair.		Eyes.	
	Fair.	Chestnut.	Light.	Brown.
Cimbric Departments Celtic , ,	55 22	45 78	56 50	42 50

Among the light eyes of the Celtic departments is comprised a large proportion of grey eyes, which, according to Topinard, are one of the attributes of the Celtic race.

The dark type which prevails in Italy is connected, on the one side, by the frequency of grey eyes in Piedmont, to the ethnical characters of the Celtic race; on the other side,

¹ Topinard, *Manuel d'Anthropologie*.

by the abundance of blue eyes in Venetia and in Lombardy, with the Germanic and Slave races. In the southern provinces an important contingent of people of the light type has sensibly modified the ethnography.

During the War of Secession, the American army, in which Europeans of every race were enrolled, furnished Dr. Beddoe with the following data on the colour of hair—

	Red or Fair.	Chestnut.	Black.
English	49 %	27	24
Scotch	50·2	25·7	23
Irish	50·5	20·1	23·3
Germans	48	22·6	23·8
Scandinavians	68·4	19·5	11·8
Spaniards and Portuguese	23·7	17·7	57·8

The Jewish race has especially attracted the attention of ethnographers. It presents fair hair and dark hair, light eyes and dark eyes. In Germany the Israelite population is much darker than the rest of the nation, since it counts 42 per cent. dark; but it comprises a remarkably fair fraction—that is to say, with blonde hair, blue eyes, and fair complexion; this fraction amounts to 11.2 per cent. of the whole. In Hungary, two-thirds of the Jews have a fair skin, 57 per cent. dark eyes, and 76 per cent. dark hair.¹

The colour of the hair, irrespective of its abundance, length, or form, seems beautiful or ugly according to our individual taste, which suffers in turn the many influences of habit, education, race, prejudices, and divers associations of ideas and sentiment.

¹ Raseri, *Materiali per l'etnologia italiana*. Rome, 1879, p. 120. So far as Italy is concerned we refer to the appendix at the end of the volume; data are given there as to the colour of the eyes and of the hair in Italy.

Still in these subtle æsthetic appreciations some fundamental ideas survive which are common to all Europeans, or, to speak more truly, to all individuals of higher race. We like hair which has rare or extreme tints, or which, combining diverse colorations, gives us at once several sensations. This is why we like flaxen, tawny blonde (rare colours), jet black, and pronounced chestnut. On the contrary, indefinite chestnut and uncertain brown are displeasing. Red hair, although rare, is disliked by nearly all because it is an almost monstrous type which is always associated with two unpleasant things—a disagreeably smelling perspiration and numerous freckles on the skin.

Hair may be so long as to exceed the length of the body, or so short as to be but a few centimetres. The Aryans and Semites have very long hair; woolly hair is always very short. The Andalusians, the Spanish Americans, and the women of Paraguay are celebrated for the length of their hair. I knew a very beautiful lady at Salta whose hair was a decimetre longer than her body, though she was of middle height; and at Paraguay I have seen young girls who might have enveloped themselves in their hair and, without any other garment, have been completely clad.

The length of the hair is independent of the thickness, or, as it is commonly said, of its quantity. Besides, the quantity is not easily appreciated at the first glance; for coarse hairs take up much more room than fine hairs, which may cause a mistake. Generally fair hair is much thicker than brown; chestnut between the two.

After fifty hair falls more frequently, and physiological baldness begins. Sometimes, however, the hair is preserved into extreme old age. The negroes, the Papuans, the Americans, become bald more rarely and later than the Europeans, who may be bald at thirty. Women, who have longer hair than men, also retain it longer, and scarcely ever become completely bald.

A section of hair examined with the microscope does not always present the same form. Pruner-Bey and Roujon believed some years ago that it was possible to recognise all the human races by the various forms presented by transverse sections of the hair. But a more attentive examination has convinced all anthropologists that these two doctors were mistaken, and had taken as constant and natural facts what really resulted from the cutting of the section of the hair.¹

To-day we know that curly hair has an elliptical section, smooth hair a round section. There are plenty of intermediate degrees between these two. We prefer, according to our tastes, some smooth hair, some curling hair; we always detest woolly hair, because we inevitably associate with it the idea of some characters of the inferior races.

It was Bory de Saint-Vincent who divided all men into the *leiotrichous* races—that is, the smooth-haired—and into *ulotrichous* races—that is to say, woolly-haired. More recently anthropologists have sub-divided woolly hair into *ericones* (continuously inserted as in the negroes), and into *lophocomes* (disconnectedly inserted as in the Hottentots, Negritoës, and the Boschimans); but Topinard has shown this distinction to be false. If the woolly tufts of the lophosome are divided with a comb, and if they are shaved, it is clearly seen that the roots of the hairs are evenly distributed over the whole surface of the skull, without forming the islets or bushes which are spoken of in books of ethnology and anthropology.²

The woolly hair of the negro is very fine; the roots are much smaller and less deep than in any other race.

Pfaff has measured the average thickness of human hairs³—

¹ *Bull. de la Société d'anthropologie*. Paris, 1873, p. 3.

² *Bullet. de la Société d'anthropologie*, 1878, p. 61.

³ Pfaff, *Das menschliche Haar, etc.*, Zweite vermehrte Auflage. Leipzig, 1869

PHYSIOGNOMY.

Down of infant at the breast	...	...	0.008—0.01
„ of the arm of a child	...	...	0.015
„ of the upper lip of a woman	...	...	0.018
Hair on the arm of a man	...	...	0.03—0.04
Eyelash of a man	...	...	0.01
Hair on the tragus	...	...	0.045
Hair of men	...	...	0.08
Hair of women	...	...	0.06
Hair on the hand of a man	...	...	0.07
Hair on the nose of a man	...	...	0.08
Hair on the pubis (of man)	...	...	0.12
„ „ (of woman)	...	...	0.15
Eyebrows of man	...	...	0.12
Moustaches	...	...	0.13—0.14
Beard	...	...	0.15
Hair of the arm-pits	...	...	0.15
Pig's bristles	...	...	0.27

Eleven years ago I wrote some glowing lines on the æsthetic and poetry of hair, which I ask permission to reproduce here. Perhaps a theft which the master of a house makes on himself may be excused.

"The eye is the window of the soul; in a lip may be concentrated enough beauty to kill a man or to save him; on the brow enough intelligence may shine to announce that man is a God begun; the chin may alone reveal infinite kindliness and gentleness; the body, by its undulations, may speak of strength and of love; but the hair, which does not speak, which does not lie, and to which sensitiveness has been denied, may multiply a hundred-fold every other beauty, and hide in its infinite labyrinths as much poetry as man is capable of experiencing and creating.

"It bends to a thousand caprices of fancy, it obeys the boldest desires of the sense of touch, it gives an infinite variety to the æsthetic combinations of the features, and on the rigid lines of the skeleton continually brings about new beauties, so that it makes a hundred diverse pictures of one face, and of a single beauty a thousand beauties. It

is living matter which yields with infinite docility to will, to taste, to art, and seems a palpitating wave of warmth, of passion, almost of thought, which flows gently and continuously as water from a perennial source.

"The head of man is the temple of his thought and of his passions ; it is there that his greatness and his virile beauty resides ; but there where the man ends and where heaven begins, the wind agitates a forest which is no longer flesh, and is not yet brute matter ; it is a frontier where our eyes never cease to seek sensations, and where a dawn of ever-changing and always beautiful forms moves and seems to live.

"In man is wanting that infinite subdivision and multiplicity of the vegetable world, and nature has compensated him in his hair. To the sense of touch a thousand voluptuous contacts are needful, and these nature has given with the hair."¹

Different nations attribute different importance to the hair, which is not always in accord with their racial rank. The Quakers, who are very high in the scale of human development, reduce the dressing of the hair to a minimum ; many American races and the Lapps exhibit the same indifference. On the contrary, the Papuans devote great attention to their hair, and they braid and arrange it in numerous different modes which truly merit the name of capillary edifices. It is remarkable among these people that the men give more care to their coiffure than the ladies, and voluntarily submit to the inconvenience of resting their heads while sleeping on uncomfortable wooden supports so that they may not disarrange the singular edifices which they have erected on their skulls. Even in Europe, among different nations and at different times, the hair has been subjected to the strangest arrangements, and to the most bizarre caprices. Twisted and retwisted, plaited or worn loose, it has

¹ See Mantegazza, *Igiene della bellezza*.

augmented in different ways the proportions of the head, simulating now a tower, now a nest, now pastilles. The æsthetic and ethnical history of the hair would deserve a volume of no small proportions.

The Beard.—The beard is peculiar to man; everywhere nature has denied it to woman. However, in many races, it is so deficient in men that they can scarcely be said to have any. Further, it does not correspond to any intellectual rank, for it is very developed at once among the Australians, and among the most beautiful and advanced types of the Aryans and the Semites.

The most beardless people are generally those connected with the Mongolian and American races. Among the Lapps I found very little beard, and only on the upper lip and the chin.

Many races endowed with beards are in the habit of plucking them out. This is the practice of the Tehuelches of the Argentine *Pampas*, who use a piece of silver for the purpose. The same prevails among the Kalmucks and the Maoris, who have a proverb—"There is no woman for a hairy man."

The Russians, Persians, Scandinavians, have very beautiful beards. Among some oriental races the clear outlines of the beard are very remarkable; while among the Australians and the Todas it is irregularly distributed over the face in little tufts.

A beard is pleasing both to women and to men, because it is a sexual character, and gives a virile aspect to the face. For the same reason it is a repulsive monstrosity in women; hence our proverb—"A bearded woman greet with stones."

Physiognomists, astrologers, and poets have discoursed and oftener joked upon the significance of the beard. Remember the stanza which Guadagnoli has dedicated to the moustache—

" Black, it bespeaks a manly boldness ;
 Brown, hot head and good temper ;
 Red, wiliness ; blonde, a noble soul ;
 White, a want of vital heat ;
 Bristly, fury ; thick, rusticity ;
 Coarse, audacity ; scanty, languor."

Generally the beard is lighter in colour than the hair both in man and in anthropoid apes.

Moles.—Moles may be found all over the body, and even on the face, where, according to their position, their size, their form, and their colour, they are an ornament or a deformity. A little brown or very black mole, placed capriciously on the chin of a lady, or near her lip, or on her cheek, throws the whiteness of her skin into relief, and by arresting our attention adds another grace to the most perfect beauty. There are some little moles fortunate enough to have received more kisses than the middle of the mouth : they have in human beauty the same value as dimples, which, sometimes in one cheek, sometimes in both, seduce and fill with love the fortunate mortal who contemplates them.

It is known that at different periods women have put artificial moles on their faces, and that the old physiognomists amused themselves with seeking a correspondence between the moles placed in different parts of our bodies.

Dalla Porta, in the fifth book of his work, gives us a face in which these correspondences are noted. *In this plate*, he says, *is seen a face half that of a man, half that of a woman, to show where the moles of either are to be found; the lines indicate the places of the face and of the body.* These cabalistic laws, which, according to Dalla Porta, govern the distribution of moles on our bodies, are nearly all taken from the Arab, Hali Abenragel. Here is a sample of these strange ramblings—

" Melampo said that a woman, if she has a mole on the

eye or on the nose, will be more attracted than is fit to Venus ; if a woman has a mole on the side of the nose, her voluptuousness will be insatiable. Hali adds that if one has a mole on the ear there will be another on the thigh . . .”

The gallant Casanova must have read the old writers on physiognomy, when in Holland he claimed by the mole found on the face of a beautiful woman to divine the existence of another in more hidden parts.

Wrinkles.—Wrinkles are folds or furrows, more or less deep, which form in the skin as an effect of time, or by the repeated action of certain muscular contractions, or, lastly, in consequence of defective nutrition.

Wrinkles have been little studied, and well deserve a scientific monograph. I have consulted my illustrious friend, Professor Bizzozero, on their histological nature, and he has kindly replied, furnishing me with the few data which science possesses on this subject.

“They develop,” says Henle,¹ “as wrinkles in the face during the course of a long life, in consequence of the diminution of elasticity and turgescence, of the extension and growing dilatation of the skin. . . . They do not only extend to the epidermis, for they are still to be seen on the dermis stripped of its epidermis.”

According to O. Simon, the slight furrows which are scattered and anastomose over the whole surface of the body correspond in direction to the bundles of connective tissue ; their axes are parallel to those of the predominant connective bundles. C. Langer has demonstrated that by the anastomosing of the connective bundles rhomboidal meshes are formed, the long axes of which, in different regions, are parallel to the direction of the natural tension of the skin. They are, however, never parallel to the principal axis of the body, but on the trunk and at the extremities they lie obliquely, anteriorly, and below.

¹ Henle, *System Anat.*, vol. ii. p. 9.

I have found nothing of interest in the treatises of Kölliker, Stricker, Krause, Pouchet, and Tourneux.

It seems, then, that wrinkles run through the entire dermis, and that their direction is determined by the predominant direction of the connective bundles which constitute the reticular portion of the skin.

The study of expression rather than histology should involve the investigation of wrinkles, since they afford inexorable marks of certain periods of human life, as Racine has said—

“Quand, par d'affreux sillons l'implacable vieillesse
A sur un front hideux imprime la tristesse.”

They may also tell a page of our history—

“Les rides sur son front ont gravé ses exploits.”
CORNEILLE.

Wrinkles may occur in any part of the body, on the hands, on the neck, on the stomach ; but they are more generally found on the face, and in the most mobile parts—for example, round the eye, on the chin, and in the interval from the lips to the nose and cheeks.

According to their direction, wrinkles may be divided into horizontal, perpendicular to the axis of the body, oblique, arched, and confused or intersecting.

The most frequent and characteristic wrinkles are the following—

The *transverse wrinkles of the forehead*, which are found even in children who are consumptive, rickety, or idiots. They are normal in the healthy man who is over forty.

The *vertical wrinkles of the forehead*, which appear very early in men who do much brain work, but which are appropriate to all at a certain age.

The *arched and intersecting wrinkles*, which are situated in the middle of the lower region of the forehead, and which indicate long and intense physical or moral suffering when they appear too early.

The *crow's feet*, which show themselves inevitably at forty, and sometimes earlier. They are formed by wrinkles which radiate from the outer corner of the eye.

The *wrinkles of the nose, transverse or vertical*, which appear either with maturity or in old age.

The *naso-labial wrinkle*, which descends from the upper part of the wing of the nose to the corner of the mouth. It is perhaps the first wrinkle which time imprints, and its precocity may be hereditary. I have had it since I was twenty-two years of age.

The *geno-mental wrinkle*, passing with a slight curve from the cheeks to the chin.

The *little wrinkles with close meshes*, which cover the face, and are a sign of age and decrepitude.

The *palpebral wrinkles*, which I should like to call *genital*; they are very delicate, and appear on the upper eyelid, sometimes on the lower. They give a look of lassitude to the eye; they are frequently seen in libertines, and in women at their periods, especially when menstruation is irregular and painful.

Wrinkles appear sooner in a man than in a woman; they are more precocious and deeper in nervous men whose faces are very mobile, and among those who, in consequence of successive maladies, have passed alternately from plumpness to thinness.

For certain wrinkles there is no possible remedy, either of prevention or of cure. It would be as good to try and stay the wings of time. The Spanish proverb rightly says—“*El diente miente, la cana engaña, pero la arruga desengaña*” (“the teeth lie, the hair deceives, but wrinkles undeceive”).

To move the face as little as possible, to anoint it with greasy substances, to protect it from excessively hot rays of the sun, are good precautions against wrinkles; but for those whose happiness does not depend on their vanity, I fear the remedy would be worse than the evil.

A natural and sovereign remedy lies in growing stout at

the period when wrinkles are wont to appear; the skin stretches, and the folds which are beginning to form retard their fatal appearance. On the contrary, nothing is more fatal than, after having been fat up to forty, to grow thin at the wrinkling age.¹

¹ This page on wrinkles contains the germ of a monograph, which, if time permit, will appear later.

CHAPTER V.

COMPARATIVE MORPHOLOGY OF THE HUMAN FACE.

AESTHETIC OF THE FACE.

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In my *Microcosm* I shall give an "Essay on Man," where all ethnological questions which relate to ethnical variations in the human face will be treated. In my *Epicure* I shall try to give a "Treatise on Beautiful Things," where, naturally, man will hold the first place.

In this chapter I shall say enough to make the work on the *Expression of Emotion* complete in its members; even those being included which, although yet without nerve or muscle, are already drawn in their essential outline. He who knows how to read between the lines will find sketched there my ethnological and æsthetic convictions, and will derive thence matter for long meditation, which perhaps will not be sterile.

Human faces are so variable in their relative proportions, in their lines, in their agreements and disagreements, that we may say there are as many faces in the world as men, and that none has been twice repeated in the course of centuries. Some, however, resemble each other so much as to be taken one for the other (as happens sometimes with twins of the same sex); others, on the contrary, are so

unlike that they seem to belong to animals of a different species. To bring together similar faces, to separate the unlike, is to classify and *ethnologise*, which may seem easy but is in reality one of the most severe tasks which can be imposed on a naturalist. The differences proceed by infinitely small degrees ; the extreme poles are united by so many intermediate rings that there is enough to confuse and weary the most penetrating observer and the most skilful classifier. If it were possible for us to have at once before our eyes every human being we might unite the Venus of Milo to the Tungoos woman, the Apollo of Belvedere to the Australian, by an infinite series of intermediates, and pass from one to the other without a lacuna and without an obstacle. Some years ago I addressed to my friend, Professor Giglioli, an ethnological letter (*Man and Men : Introduction to a Journey Round the World in the Italian corvette, "Magenta."* Maisner, 1876), in which I made my confession of faith on the human race. To-day, after the lapse of years, after the internal and external work of criticism, which eats into the steel of the most robust convictions, I experience a lively satisfaction in affirming that I still think the same. I have been able to modify the arrangement of some branch or some twig of the ethnological tree, but my syllabus has still for me all the authority of a dogma. Here is my syllabus, in which to replace the words *man* and *race* by *face* is to give my confession of faith on the comparative morphology of human faces.

1. Man is one of the most cosmopolitan and variable of animals ; also he presents a very great variety of races and sub-races.
2. The number of races is indefinite ; many have disappeared ; others are forming and will form.
3. The further we go back into history the more races and sub-races we find, because formerly men travelled less, and remained longer isolated from one another.
4. At the foot and at the summit of the tree of humanity

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COMPARATIVE MORPHOLOGY

unlike that they seem to belong to ~~the same~~ species. To bring together similar forms, unlike, is to classify and ethnologise, but is in reality one of the most difficult tasks imposed on a naturalist. The variations are infinitely small degrees; the extremes are many intermediate rings that the eye weary the most penetrating classifier. If it were possible for our eyes every human being from the Peruvian to the Tungus, may be we could pass from one to the other without obstacle. Some years ago Professor Giglioli, an ethnologist, in his "Introduction to a Journey Round the World," at Magenta. Many men of science have given up the notion of faith on the matter. After some years, after the which eats insects, experience a change, the same. I have seen some brachycephalic syllabus he said, is my opinion by far the best morphological. In general and on as men inhabit this world, be founded which will be founded. I shall also write my "clamans in deserto," if my heart and thought of one, or more circumstances, may be of an epoch and of a nation. to trace in the manner of the which in my opinion includes all the For me, this great problem is circumlofty definitions which emanate from only diverse, but opposed—

"splendour of truth."—PLATO.

"The toad is his mate."—VOLTAIRE.

"Beauty: is it not subject to the caprices of the senses, of opinion?"—MIRABEAU.

the branches and branchlets approximate, so that the highest and the lowest touch. The negro, who rises to the Caffir, approaches the European, and the European, degenerated by goitre, cretinism, or hunger, approaches the negro and Australian.

5. Generally the lowest races are black or brown; the highest are white or almost white.

6. In the classification of races we ought as far as possible to exclude the question of origin, because investigation into origins is the most fertile source of ethnological errors.

Since the day on which I published my ethnological tree, in which I had classed every race by the criterion of intelligence, this tree (Plate 4) has given birth to two others, which I now present to the world for the first time (Plates 2 and 3). In the third plate we see races approximating in their external morphological characters, without any pre-conceived idea of monogenism or of polygenism, without any deference to any philological or ethnological authority whatever. In the fourth we have men distributed according to their rank in beauty such as we, Aryans, conceive it.

Here we have three classifications—to wit, a *system*, a *method*, and an intermediate *modus agendi*—which has at once something of method and of system. In fact, in Plate 4 races are distributed by the sole criterion of intelligence; in Plate 2 by that of the skull, the colour of the skin, the nature of the hair, etc.; in Plate 3 we have the morphological element reinforced by subjective labours.

The two systems of classification which resemble each other most in the distribution of the branches are the first and the second—an evident proof that the ethnological essay which I proposed to the anthropologists was not as systematic as it might appear at first sight. In fact, as the brain is a very complex organ, and so to say the supreme synthesis of all the vital energies, a hundred secondary characters are therein concentrated, by which it is modified, and with which it rises or degenerates.

I think that we may reduce the principal ethnical types of the human face to the following—

- 1. Aryan type }
- 2. Semitic type } which are frequently mixed and confounded
- 3. Negro type.
- 4. Negrito type.
- 5. Hottentot type.
- 6. Mongolian type.
- 7. Malay type } tending towards the Aryan.
- 8. American type } , , , Mongolian.
- 9. Australian type.

In Plate 8 we have three idols, the one an old Peruvian, the second a Maori, the third a Papuan, in which may be seen how the people of low development always give to their gods the ethnical type which is that of their race. As with the gods so with the national masks. Studying the *stenterello*, the *gianduia*, the *meneghino*, the *pantaloons*, the *harlequin*, and other Italian masks, we recognise that in these caricatures a people always personifies itself while exaggerating the characters of its own physiognomy.

Volumes will be written on beauty in general and on human beauty in particular, so long as men inhabit this planet, and schools of æsthetics will be founded which will change their lines more than once. I shall also write my volume, which may remain *vox clamans in deserto*, if my opinion represent but the vote and thought of one, or which, under more favourable circumstances, may be considered as the utterance of an epoch and of a nation.

Meanwhile, permit me to trace in the manner of the magician a triangle, which in my opinion includes all the æsthetic casuistry. For me, this great problem is circumscribed by the three lofty definitions which emanate from three genuses, not only diverse, but opposed—

“Beauty is the splendour of truth.”—PLATO.

“Beauty to the toad is his mate.”—VOLTAIRE.

“Physical beauty: is it not subject to the caprices of the senses, of climate, and of opinion?”—MIRABEAU.

In the beautiful we seek the type of perfection, the type of everything, the prototype of every type. The butterfly is beautiful when it combines ideal lightness with the dazzling and many-hued splendour of the forms proper to this insect; the tawny lion is beautiful in his strength with his great mane. Man is more beautiful than any living creature, because, placed at the summit of animal existence, he combines all the most elegant forms with the most powerful manifestations of life; he is beautiful above all to us because we surround him with a sympathy without limits, and because beauty is multiplied to infinity when a great number of intellectual wants are satisfied at once.

There is a human beauty, a sexual beauty, a beauty for each age, for each race, for each family, for each individual. We believe too readily, to paraphrase the subtle definition of Voltaire, that the white woman is beautiful to us because we are white, and that to the negro in turn nothing is fairer than his coal-black mate with her thick lips. This is not true, at least so far as the negroes and the Americans of the south are concerned. If the negress or Indian woman is prized in proportion as she conforms to the type of her race, I can affirm that when they have to choose between a beautiful white woman and a beautiful negress, or beautiful Indian, they unhesitatingly give the preference to the first.

Mancilla records in his military journey across the Argentine Pampas the following dialogue which he had with a *Ranquele*—¹

“Which do you like best, a China or a Christian?”

“A Christian.”

“And why?”

“The Christian is whiter, bigger; she has a more delicate skin; she is more charming.”

I firmly believe in a type of human beauty superior to

¹ Lucio V. Mancilla, *Una excursion a los Indios Ranqueles*. Leipzig, Brockhaus, 1877, vol. ii. p. 277.

all the secondary types of beauty—Mongolian, American, negro, etc.—and I always find that when a man of inferior race is exceptionally beautiful he approximates to our Aryan type. We may see this among the Japanese women and among the Caffirs.

Sex introduces such a disturbing element into human morphology that there are two types of beauty—one for man, the other for woman; and that in the same race the male and female are not always equally beautiful. It seems that the special type of each race lends itself better, one to the beauty of the male, another to that of the female. Thus in Italy the men are more beautiful than the women; the contrary is the case in Spain.

The most beautiful women are found, according to my knowledge, among the Spanish and the English. As to those of whom I only know by the report of others, I mention the beauty of the Georgians and the Circassians.

We find admirable specimens of masculine beauty in Italy, England, and the East.

The Tungoos women are perhaps the most horrible of all. In many of them the cheek bones occupy the largest part of the face, and the eyes are but long and narrow slits through which one catches sight of two little black globes without expression.

Among ugly men are the Australians, the Mocovis of the Argentine Republic (whom I have visited several times), the inhabitants of Fez.

Every race has the feeling of human fraternity; every man born under the sun feels the same impulse of *excelsior*. We see it in the repugnance which many very white mulattoes feel to avowing that they have negro blood in their veins, and still more in the horror which all experience at the idea of resembling apes.

There are some negroes, Australians, and Papuans who pull out, file away, or stain their teeth so that they may not resemble dogs or apes. A low and hairy forehead, a

prominent jaw, a nose reduced to a minimum, appear ugly to all, or at least to nearly all, the inhabitants of the globe.

Like the butterfly, who, issuing from its chrysalis stage, rejects as a blemish all vestiges of its larval condition, men everywhere look upward, and touch the earth by the smallest possible part of their bodies.

We, weaving phantasies at will, may make as many human races as there are distinct species; we may modify and upset our systems and methods of classification: but, despite all, the bipeds who know how to light a fire and to speak, feel themselves to be brothers; despite the learned, they love and they kill each other, but over the corpses of those who succumb they weave again their knots of love.

PART II.

THE EXPRESSION OF THE EMOTIONS.

CHAPTER VI.

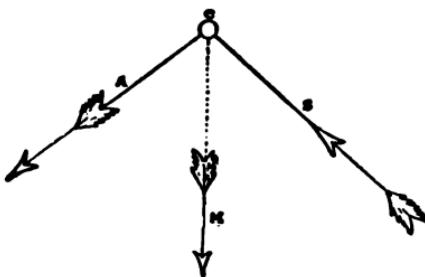
THE ALPHABET OF EXPRESSION.

If we would take the word expression in too wide a sense and give it its etymological signification, we should risk the danger of embracing at the same time too many different things, and of making physical expression synonymous with language.

Language is more expressive than any physical expression, but it is not the same thing, although the latter may be a part of language, or even substituted for it. Of this we may at any time obtain confirmation by watching a deaf mute, or two people who, without knowing a common language, have need of communicating their ideas or emotions to each other.

The expression of emotion is one of those centrifugal energies which arise from those great transformers of force which we call nerve centres. A given quantity of movement from without in the form of light, of heat, of sound, is transformed into emotion or thought, which, taking a centrifugal direction, gives places to muscular movements. These movements may be cries, articulate words, or gestures. Generally the energy of expression is only a part of the transformed force, often even a very small part, which accompanies more complex and higher phenomena. The annexed figure represents graphically the way in which

the phenomenon of expression is produced. A sensation, S, reaches the centre, C, and is there transformed into *love*, which follows a centrifugal path along the line CA, and a current of expression which follows the line CM.



Thus we may say that the expression is the *extra current* of the emotion and of the thought.

The expression of emotion is one of the most elementary facts of nervous life ; it is manifested even in very inferior organisms. Even infusoria, molluscs, insects, have movements which do not directly serve in alimentation, respiration, circulation, or generation, and which are purely expressive phenomena. Physical expression has in the biological economy two diverse and important functions.

It may replace or complete language.

It may defend the nerve centres and other parts of the body against dangers of different kinds.

Like language, physical expression presents many varieties of form ; but it is always a more universal language. Words, whatever may be their origin, have always a conventional meaning ; thus they are only of value to one who comprehends them and follows their meaning. Spontaneous physical expression, on the other hand, is the language of all intelligent men, and extends its influence beyond the domain of humanity ; it is comprehensible to those animals who most approximate to us by the development of their nerve centres. Say to a dog, to a child who does not yet know how to speak, or to a foreigner who does not

know our language, the word *brigand*, at the same time smiling benevolently or making affectionate gestures ; these three beings, very different in their natures, but all equally ignorant of the sense of the word brigand, will reply to you with an expression of affection. Say to them, on the contrary, the word *dearest* with an expression of hatred or a threatening gesture. You will see them shrink with terror, attempt to escape, or utter complaints. This very simple example is enough to indicate the boundary which separates conventional language from the simple and elementary language of physical expression.

Physical expression, however, has also many conventional signs, the meaning of which it is necessary to know, as these take the place of the words of a certain language. A Lombard, a Frenchman, a German, who found themselves for the first time at Naples would certainly not understand the mute expressions of a Neapolitan, who to say "*No*" closes his lips while throwing his head backwards. In the same way many people are not offended when they see a Milanese place his thumb on the point of his nose and stretch the other fingers of the hand towards his interlocutor, moving them alternately ; and none of us would get into a passion if we saw this same Milanese cross two fingers at right angles to indicate a certain length, while this gesture would be enough to raise a tempest in the Argentine Republic. We shall not speak in this book of that part of physical expression which is quite conventional, and the study of which goes with that of the study of deaf mutes. We shall occupy ourselves here with the phenomena of spontaneous automatic expression, which are almost the same in every country in the world, and which constitute a veritable universal language. A caress, a kiss, a kindly smile, are interpreted everywhere as the signs of love ; while the act of gnashing the teeth, that of raising the clenched fist, and others of the like nature, will always be considered as expressions of menace, rage, hatred.

There are certainly equivalent forms to express these sentiments, but they are enough alike to prevent equivocation. Two Malays prefer to embrace each other nose to nose; we prefer to kiss with the lips: but no one would take the action of rubbing nose to nose as an expression of hatred; and every form—differing among different people—of kindly and respectful salutation will be always and everywhere taken for what it is meant to be.

But more frequently physical expression, without being substituted for articulate speech, completes and modifies, or reinforces it.

The second function of physical expression is to protect us from danger. A cat, face to face with a dog much stronger than itself, bristles up its fur and enlarges itself so as to simulate a much greater size than it really possesses; in the same way, by threatening with the fist, showing our teeth, rumpling the brows, we seek to make a formidable appearance that we may exhibit all our power of offence.

Many gestures, without really defending us, show our intention of defending ourselves. To close our eyes at a flash of lightning, to raise our arms above our heads when the earth quakes, certainly does not protect us, but it is an automatic expression of defence.

To maintain the thesis that all expression is defensive would be to utter an opinion paradoxical in appearance but true at bottom. When emotion is strong it may kill us if it does not find vent by means of the motor nerves and translate itself into a phenomenon of expression. In many cases the nerve-centres and, in consequence, life, are endangered by an inability to weep or laugh. We all know the story of the husband who killed his wife by binding her down tightly and tickling the soles of her feet. Many like facts occur every day in the battle of life.

The most eloquent man in the world, if he had to speak in a moment of great emotion with his limbs bound down

to his body, would experience an unspeakable torture ; his eloquence would be stilled and transformed into disorganised and delirious convulsions. On this account I believe I may formulate a law which marks one of the fundamental letters of the alphabet of expression.

The wealth of the elements of expression is always in close relation with the intensity and the sensitiveness of the psychical act.

A slight emotion leaves us almost motionless, while a very great emotion produces a very hurricane of expressive movements. If by the excess of the centrifugal discharge the muscles remain in a state of static contraction, the excess of expression may simulate tetanus.

Thought, first and foremost a mathematical phenomenon, has nearly always a less expansive expression than feeling.

To convince oneself of the difference of the parts played in expression by thought and feeling, it is enough to compare an orator who is reading his discourse with one who abandons himself to inspiration. In the first case gesture is rare, studied, cold, often out of place and inappropriate. In the second it is vigorous, efficacious, and largely expansive. The effect of words read or spoken exactly corresponds to this difference of physical expression. No book will ever take the place of a speech or of a lesson. If we are at times inclined to hurl anathemas on the worship of our age for parliaments and speeches, we must yet confess that the spoken word is one of the greatest human forces. Every religion and many philosophical schools have been founded by word and by expression more than by books. There may be an absolute identity of ideas in a written and a spoken book ; but these ideas, issuing from the burning lips of an inspired man, enter into the brain of the multitudes by way of the ear, which is the high-road of feeling. The written word, on the contrary, is cold ; it reaches the intelligence by the eye, which is an intellectual sense, and little sensitive. This

perhaps is one of the reasons why the blind are less unhappy than the deaf mute. The latter is deprived of emotion; the other has only lost the sight of forms. The spoken word is apostolical; it is seen, it is felt, it is absorbed, living and palpitating; it is impregnated with human sensations and emanations. I give a few facts, taken from the most varied sources, to maintain the truth of this contention.

Call out in the middle of a crowd—"A conflagration! a conflagration!"—or begin to cry—"Fire! fire!"—while at the same time you run off gesticulating. In the first case many may stop and inquire. In the second there will be a general and irresistible stampede. Gesture is more automatic than speech, and automatically induces imitation. Of this we may convince ourselves by suddenly opening an umbrella in the middle of the street when the weather is uncertain, yet without actual rain, or by putting the hand into the pocket in an omnibus as though to pay the fare. Many umbrellas will be opened and many persons will draw out their pence by the simple force of automatic imitation.

Remember the tumult which broke out one day in a theatre in Germany when by chance the Olympian Goethe happened to be in the balcony. Scarcely had he risen and made a gesture to calm the waves and the pandemonium of the crowd than all was silent as with a spell, and without a word from him. If, on the contrary, he had spoken without rising and making a gesture, the effect would have been much less, and perhaps *nil*.

All great orators have strong power of expression which adds to the efficaciousness of their words. With many a certain gesture, a certain *tic*, is necessary, that their words may flow easily and brilliantly. Minghetti cannot speak unless he has a paper-knife in his hand. Poor Boggio, of tragic memory, had to raise one leg and worry the bottom of his trousers before he achieved eloquence.

A friend, importunate, if any ever deserved the term,

writes us an eloquent letter to ask for money, and we refuse. Another comes himself and, with a piteous gesture and a skilful expression, obtains at once what the former failed to gain.

A woman who has resisted a hundred seductive letters will yield perhaps to the first pathetic look, to the first loving caress.

The sympathetic relation between the psychical facts comes perhaps from the analogy of their inner natures, and probably from the identity and relation of the centres of expression which produce them. An intellectual phenomenon raises a thought; an emotion awakens an emotion; an automatic action calls forth another automatic action.

If from individual we pass to great social and ethnical facts we always see the same law verified. The more feeling a nation has, the more rich and eloquent are its methods of physical expression. This can be seen in a picture and sculpture gallery when men of different characters and diverse race stand in the presence of a moving work of art. And yet this interesting scene of comparative physical expression, instead of inciting to an analytical and profound study of the psychical constitution of the different human families, for the most part arouses vulgar impertinences. Italians, of animated expression, say of the English—They feel nothing! And the English say of Italians—They are buffoons! Neither of these two impertinences has any foundation. The Italian nerve cell discharges at once the centrifugal energy which accumulates there; unfortunate for it if by the thousand telegraphic threads of expression it should not find as many safety-valves! The English cell is deeply charged, and slowly imprisons the accumulated force. But men to the end of time, instead of studying each other and trying to know each other better, to love each other more, to esteem each other more, will continue to throw in each other's faces

these international insults, which are summed up in the more vulgar formulæ—"He is a genius, but he is mad." "He is a happy man, but he is a fool!"

In the expression of the emotions there are some acts which are not directly defensive, but which should be ranged among the numerous phenomena of sympathy which the divers regions of the nervous system present. If we do not always keep in mind the sympathetic automatism of many gestures, we shall never understand one-half of the expression of the emotions. In the same way, unless we study the contrast of our will with automatism, we shall not understand the demi-tints, the varied results of expression.

Here are four different facts, all of which exemplify what we affirm. A dog looking at a savoury piece of meat at once pricks up his ears in the direction of the coveted morsel.

A billiard player seeing his ball impelled in the wrong direction, throws eyes, lips, often the whole body, into the line which it should have followed.

The tailor giving all his attention to the cutting of a precious stuff, accompanies his scissors with a synchronous movement of the jaws.

The rower often makes a movement of the lips at the end of each sweep of the oar.

When our attention is directed to a phenomenon for the purpose of observing it, the spontaneous and natural action is nearly always destroyed. This we see nearly every day in the case of yawning, which is promptly stopped by an inopportune observer.

Including all living beings in a general view, we may say that the expression of emotion augments in intensity and variety as the animal rises to a higher scale, and becomes more sociable. The oyster itself has its expression of pain when we sprinkle it with lemon juice; but from this to Niobe or to the Laocoön there is a long interval.

With the wealth of physical expression wealth of anatomy always corresponds. The expression of the white man is higher than that of the negro, and the latter higher than that of the ape, because the facial muscles are more and more distinct in proportion as we rise from the ~~anthropoid ape~~ to the Aryan. It is very probable that in some great dramatic actors, and in persons who can imitate by the movements of their face the grimaces of animals and the most different emotions, we should find a more delicate and more complete division of work in the anatomy of the facial muscles. Here is what Bischoff has written on the subject—

"In my young chimpanzee, as in the ourang-outang, and in the hylobate, there are just round the curve of the eyelids, the curve of the mouth, and the buccinator, certain muscular fibres to which the names of the corresponding muscles of the human face might be given. Still it would be difficult to justify this identification, because these muscles are not at all isolated from each other.

"The same is the case among many other apes, and I believe that this may agree with the ancient opinion that man is distinguished from all other animals, apes included, by the greater development and more complete isolation of the muscles of the face. The apes, it is true, are great at grimacing, and the lowest passions of desire and of anger are energetically depicted on their faces; but the physiognomical expression of our face, which renders in so faithful and characteristic a manner every emotion and every passion, excels theirs, as much as the development of facial muscles excels that of the ape's."¹

Among our domestic animals also expression keeps pace with intelligence; while the pig and donkey have poor powers of expression, the horse and the dog are richer. The more they approximate to us by their anatomy, the

¹ Bischoff, *Beiträge sur Anatomie des Hylobates leuciscus*. München, 1870.

more easily we understand animals, and the more readily they understand us. And so it has been since men and beasts have lived together; for many centuries before Darwin declared us brothers in the name of morphology, nature had united us in a great biological and psychical fraternity.

CHAPTER VII.

THE DARWINIAN LAWS OF EXPRESSION.

IN the preceding chapter I have attempted to reduce the laws which govern the expression of the emotions to their most simple form, and to trace, so to say, their alphabet. I have certainly not attempted to give all the laws of expression. I shall try to broadly sketch the most important of their details in the rest of this book. Here I desire to rapidly discuss the three fundamental principles on which the expression of the emotions is based according to Darwin. These three laws do not constitute, in my opinion, the principal title of the great English naturalist to glory. But as they are enumerated in an immortal book, which has caused this order of study to make an enormous stride, we ought to know them and examine up to what point and in what way they are in accord with natural phenomena.

1. I call the first law of Darwin *the principle of the association of useful attitudes*. Certain complex expressions are directly or indirectly advantageous in certain conditions of the nerve centres. When these conditions are reproduced, even to a slight degree, this expression is realised by force of habit, even though it may be no longer of any use.

2. *Principle of antithesis*. Certain psychical conditions bring certain habitual actions which are useful. When the nerve-centres are in an opposite condition there is an involuntary tendency to make directly contrary movements.

3. *Principle of actions due to the constitution of the nerve-centres, independently of the will, and up to a certain point also of custom*.

With all the respect due to one of the greatest observers and greatest thinkers of our age, I think these three principles badly formulated and very confused. Nowhere more than here has Darwin shown the defects of his too analytical mind. And yet many believe he was inclined to too wide a synthesis! Wide if you will, but wide as nature is wide, one of whose most admirable interpreters he is.

The first principle is badly formulated. The idea in it is rather stamped than sculptured. As for the second, as well say that the opposite causes produce opposite effects, for the cases of apparent antithesis are ultimately but phenomena of sympathy. Unless I am mistaken, we cannot call the third assertion a principle at all. To say that certain nervous currents come in one direction and some in another does not explain anything. To say that pleasure causes laughter and grief causes weeping is to affirm an evident fact, but not to explain it.

If I were allowed to translate the three Gothic laws formulated by Darwin into the more symmetrical form of Latin, I should enunciate these principles as follows—

1. There is a useful expression of emotion, *defensive*.
2. There are certain facts of expression, *sympathetic*.

If, after having ventured this somewhat summary criticism, we pass to the details of Darwin's work, we find therein true discoveries made in a domain hitherto abandoned to empiricism and divination; and we shall find there a great wealth of details. Here are some—

The closing of the eyelids protects the eye; but we frequently close them when no danger threatens; we close them, for instance, if we suddenly hear a loud noise. If we neglect to take account of this automatic tendency to self-defence, half of the expression of emotion remains obscure.

I frequently find an identical, or, at least, a very similar expression for very different sensations and emotions. But this at once leads me to imagine that there must be

between these two sensations or emotions a common character in the central phenomenon which is associated with them. We shall return to these facts later on ; but we may examine a few at once.

We scratch our head if we feel any sort of irritation there ; but we perform the same action to help us to an idea, or a word which evades us, to help us out of a perplexity.

We raise the upper lip and pucker the nostrils to ward off a bad smell which enters with the inspired air and reaches the mucous membrane ; but we make the same gesture to express contempt or aversion for any one, or anything which offends our dignity or our moral sense.

We rub our eyes to get out a grain of dust or a fly which has got in, and causes us inconvenience ; but we have recourse to the same action to get rid of a painful idea.

We cough to rid ourselves of any phlegm which encumbers the pharynx, the larynx, or the trachea ; we also cough to clear up our ideas, to find the right word or phrase, to extricate ourselves from embarrassment, to gain time. The great Cavour continually did so in his parliamentary speeches.

We put our hands forward (if we have time) when we fall ; but we do the same if in play we fall upon a cushion or a bed, where we could not do ourselves any injury.

We draw back our head from a lighted torch, or from the hands of an over-excited speaker, but we make use of the same gesture to express our withdrawal from a proposition which we cannot accept.

We close our eyes at the sight of a horrible scene ; but we do the same in the dark if our imagination calls up before us a terrible picture.

Analyse these facts well and you will be able to understand nearly all. Sometimes expression is absolutely and purely defensive ; sometimes it is only apparently defensive in the face of an imaginary danger ; sometimes it is

sympathetic under the dominion of an emotion analogous to another emotion which expresses itself in defensive gestures.

Many phenomena of expression do not appear to us to have any defensive character in consequence of our ignorance of biology. But Darwin has perfectly explained that the construction of the orbicular muscle of the eyelids in crying protects the delicate organ of sight from congestion. Likewise, to bite the lips, or any other part of the body, to tear one's flesh, or to tear out the hair, may appear to the vulgar but to add pain to pain ; but, on the contrary, these artificial lacerations, causing a diversion from the troubles of the more important nerve-centres, preserve the brain from grave dangers which would result from too vivid painful emotions.

Darwin confesses that he does not see the utility of the trembling which accompanies fear. But, after my experimental studies in pain, I find it extremely useful ; for it tends to produce heat, and warms the blood, which under the influence of fear tends to become excessively chilled. In the same way I believe that I have found why, with great pain arising from the sense of touch, or feeling generally, we leave off breathing and only gasp spasmodically. We produce thus a slight anaesthesia of the nerve-centres, and indirectly succeed in rendering the pain more bearable.

Finally, sobs, loud complaints, all forms of groaning, are useful, because thereby we excite in those who listen to us a compassion which may be of aid to us. This often occurs with animals, and I have noticed it for my part in America, in the case of the ox, and of a little paroquet (*Conurus monachus*).

Defence and sympathy which govern all expression are always more automatic in the animal than in man, in the child than in the adult. This is a fact not peculiar to the expression of emotion, but is common to all acts of psychical life. The *Sphinx macroglossa* scarcely issues

from its chrysalis before it begins to fly on to the flowers and to execute perfectly all those movements which are necessary to keep it suspended in the air and to suck honey from flowers. We, on the contrary, sons of Prometheus, how much work, what study, how much experience we need before we succeed even in carrying a spoon straight to our mouths ! The horse, from the moment of its birth, runs and leaps. We require months and years to learn to draw on a pair of gloves.

However, we find in animals expression which is not directly defensive, but only so by atavism, and which, consequently, is purely sympathetic.

Darwin has the merit of having collected and interpreted many facts of this sort. The dog, before stretching himself on the carpet, turns round several times and digs with his paws in front, as though he would beat down the grass to make a comfortable place for himself. At another time he will scratch at a hard soil to try and bury his excrements, although there is neither earth nor leaves to remove. Similarly cats dislike to wet their feet, perhaps because their ancestors were born on the dry soil of Egypt, and they have a tendency to cover every place which is a little damp with mould or dust. Darwin's daughters succeeded in making a young cat go through these movements by spilling some water in a glass placed behind its head.

In automatic expression children are midway between animals and us. Frequently a schoolmaster will punish a whole class which has begun to cough and sneeze because one pupil has coughed or sneezed involuntarily. He genuinely believes that they are all guilty of having coughed or sneezed on purpose. And yet it is nearly always, if not always, an irresistible automatism which impels children to do in imitation what one of them had done in real need. It is the old story of the sheep who all run away from the fold when one runs, and who all enter when the one has entered. And we adults, who are neither children nor

sheep, also participate in this animal automatism. The *claqueurs* and *fischiatori* by profession know this well ; they often succeed in determining the success or failure of a play by organising clapping and applause so as to lead the crowd to automatically applaud or hiss. Generals who have commanded in great battles could tell of tragic facts in very divers fields which happened for the same reason.

The instances of sympathetic expression are more difficult to explain than defensive phenomena, but with patient and deep analysis they too, in the end, may be accounted for.

I should like to arrange them in the following categories—

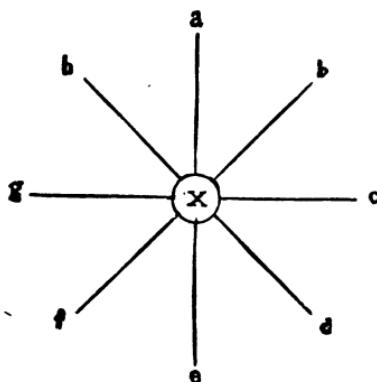
Imitative Sympathy.—This is the most common and the easiest to understand. We yawn, we run away, we look into space, because others yawn, run away, or look into space.

Muscular or Mechanical Sympathy.—We say “*No*” first with the head, then with the hand, then again, if need be, with the trunk. We threaten by opening the mouth, by looking askance, by closing the fist, and sometimes by raising the foot.

Sympathy of Functions.—The most elementary amorous expression is located in the pelvis, where the genital organs are situated, then extends to the hand which caresses, and still more, to the mouth which plays so great a part in the pleasures of love.

Obscure Sympathies of the Nerve Centres.—These are the most obscure facts of animal expression, and they can only be explained by the future progress of histology. Such are the actions of scratching the head ; of closing the eyes to express embarrassment, uncertainty, fear ; that of elevating the nose to show contempt.

The general physiology of all acts of sympathetic expression is figured in the following diagram—



A central emotion, *x*, being given, to find why it radiates in the sympathetic centres *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*. This first problem once solved, the secondary problems which follow must be solved—

What does a given expressive movement signify?

What intensity of emotion does it denote?

What æsthetic, moral, intellectual warmth does it indicate?

Is it defensive in reality or only in appearance, or is it sympathetic?

Is it the exact expression of truth, or is it totally or partially simulated or replaced by other disturbing causes?

When for each expressive motion we are able to reply to all these questions we shall have the right to say that we know it wholly, in its origin, its progress, and in its details.

In the science of nature, it is often more difficult to question than to reply, and a well-put question elicits reply spontaneously and easily.

CHAPTER VIII.

CLASSIFICATION OF EXPRESSIONS—GENERAL VIEW OF ALL PHENOMENA OF EXPRESSION.

WHEN we view a natural phenomenon we may, observers or artists, feel proud at our success in discovering its principal features, the shadows and penumbræ, and especially at being able to reproduce it faithfully on the page of a book, on a canvas, or in marble. But our pride falls when we would place this phenomenon in its natural position under its rubric in our system, and make of it another link in the great chain of antecedent and consequent, of cause and effect, of morphological harmonies and dissonances. It is then that our ignorance appears in its humiliating nakedness ; we feel that we are but the modest interpreters of the surface of things, and the system of our classification shows all its weakness. And yet thereby we must always reach the relentless scrutiny of our conscience in which science with modest frankness avows the uncertainty of her conclusions, and in which art renews itself in the pure sources of truth.

This is what we wish to do for the science of expression, in order that we may know precisely what its actual boundaries are, and in order that our work may provide posterity with the balance-sheet of our knowledge upon the subject which we have undertaken to treat.

Let us then begin with a little analysis, so that we may afterwards rise somewhat higher and draw bolder lines. Every phenomenon of expression should be studied in the nature of the emotion which gives birth to it, in the

degree of the emotion, in its progress, in the disturbing elements which may accompany and modify its spontaneous expression.

The nature of the emotion is the characteristic and principal element of all expression. We will present in a general view the principal expressions of which man is susceptible by dividing them into three great categories—

Expressions of Sense.

Expressions of Passion.

Expressions of Intellect.

EXPRESSIONS OF SENSE.

Stages of Desire, Pleasure, and Pain.

Needs of nutrition.	{ Hunger. Thirst. Muscular activity. Muscular repose. Sleep. Cold. Heat.
General organic needs.	{ Need of Oxygen. The zest of living. The pain of living. The pleasure of death. The pain of death. Diverse needs of sense and of excretion.

Needs of special senses.	{ Expressions relative to touch. " " taste. " " smell. " " hearing. " " sight.
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Needs of reproduction.	{ Desire to fertilise. " to be fertilised. " to bear children. " to suckle.
------------------------	--

Derivative. { Expression of modesty.

*PHYSIOGNOMY.***EXPRESSION OF THE PASSIONS.***Stages of Desire, Pleasure, and Pain.*

Feelings relative to self.	Love of oneself.
	Hatred of oneself.
	Fear.
	Courage.
	Self-esteem.
	Physical vanity.
	Humility.
	Decorum.
	Sexual love.
	Maternal love.
Feelings relative to others.	Paternal love.
	Filial love.
	Fraternal love and love of humanity.
	Compassion.
	Veneration.
	Religious sentiment.
	Hatred.
	Anger.
	Cruelty.
	Contempt.
	Irony.

EXPRESSIONS OF THE INTELLECT.*Stages of Desire, Pleasure, and Pain.*

Attention.

Meditation.

Expression of mechanical work.

- “ , artistic work.
- “ , scientific work.
- “ , literary creation.
- “ , poetic ecstasy.
- “ , the work of observation.
- “ , speech.
- “ , discussion.
- “ , harmonious work.

Pain of doubt.

Joy of discovery.

Æsthetic pleasures and pains.

Pleasures and pains of injustice.

Stupor.

This cursory view almost gives an elementary analysis of expression, for I have tried to group into natural families the simplest and most ordinary expressions which are associated with the life of the senses, of emotions, and of thought. But it is seldom that a phenomenon of expression occurs in its simplest condition; more frequently it is combined with others. We have, then, binary and ternary combinations. Here is a sketch of the most habitual compound expressions—

SKETCH OF THE PRINCIPAL COMPOUND EXPRESSIONS.

In the Domain of Sense.

- | | |
|--------------------|---|
| Pleasure and pain. | { In sexual intercourse.
In child-birth.
In suckling.
In itching.
In the rapid transition from cold
to hot, and <i>vice versa.</i> |
|--------------------|---|

In the Domain of the Passions.

- Melancholy.
- Cruelty and luxury.
- Pride and irony.
- Humiliation and irony.
- Love and ecstasy.
- Horror and compassion.
- Fear and audacity.
- Vanity and modesty.
- Eagerness to possess and cruelty.
- Love and rage.
- Rage and irony.
- Veneration and stupor.
- Contempt and rage.
- Cruelty and pride.
- Physical pain and courage.
- Strife and cruelty.
- Resignation and joy.

*PHYSIOGNOMY.**In the Domain of Intellect.*

Melancholy.	
Ecstasy and mechanical movements.	
Exercise of thought and dancing.	
Work of education and contempt.	
" " "	love.
" " "	hatred.
" " "	pain.
Labour of speech and pride.	
" " "	humility.
" " "	strife.
" " "	hatred.
" " "	love.
Artistic work and luxury.	

A transitory emotion has a fugitive expression which leaves no trace; but when it is repeated several times it leaves on the face and other parts of the body a lasting impression which may reveal to us a page in a man's history. Permanent expressions may be grouped in the following table—

PERMANENT EXPRESSIONS.

Expressions produced by permanent conditions of the organism.	The consumptive countenance.		
	"	dropical	"
	"	calculous	"
	"	cancerous	"
	"	neuralgic	"
	"	hypochondriac	"
	"	maniac	"
	"	melancholy	"
	"	dyspeptic	"
Expressions produced by the abuse of a function, or by certain nerve stimulants.	The countenance of the glutton.		
	"	"	famished.
	"	"	libertine.
	"	"	muscular exhaustion.
	"	"	the dissolute.
	"	"	due to effects of coca.
	"	"	opium.
	"	"	hashish.

				The melancholy countenance.
	"	pessimist	"	
	"	optimist	"	
	"	disturbed	"	
	"	debased	"	
	"	discouraged	"	
	"	audacious	"	
	"	suspicious	"	
	"	defiant	"	
	"	modest	"	
	"	ascetic	"	
	"	chaste	"	
	"	hypocritical	"	
	"	frank	"	
	"	avaricious	"	
	"	despairing	"	
	"	benevolent	"	
	"	misanthropic	"	
	"	giddy	"	
	"	sociable	"	
	"	imperious	"	
	"	ferocious	"	
	"	cruel	"	
	"	meditative	"	
	"	stupid	"	
	"	inspired	"	
	"	ecstatic	"	
	"	frightened	"	
	"	pugnacious	"	
	"	contemptuous	"	
	"	ironical	"	
	"	patibulary	"	
	"	inquisitorial	"	
Expressions produced by the repetition of certain emotions or certain intellectual labours.				The physiognomy and expression of the priest.
	"	"	"	" soldier.
Expressions produced by the prolonged exercise of certain professions.	"	"	"	" chemist.
	"	"	"	" druggist.
	"	"	"	" sailor.
	"	"	"	" notary.
	"	"	"	" clockmaker.

It seems that after so many tables and rubrics our work of the classification of phenomena of expression

ought to be ended ; but we have still to define and to rank certain forms of expression which are independent of the nature of the emotion, and which correspond to the degree of the latter, and still more to certain conditions, transitory or permanent, in which the individual is placed.

Thus the expression may be strong, feeble, uncertain, confused, eloquent, or scarcely perceptible, disturbed, convulsive, and that whatever may be its signification, whether joy or pain, hatred or love ; similarly each individual, according to his condition of health or disease, of strength or weakness, and according to the permanent conditions resulting from his nervous organisation, will express any emotion in a manner peculiar to himself. Thus it has been said of the form of the expression that it depends on age, sex, and race. It is doubtless for this reason that so few artists can express in their works so many different elements, when they have to render in the face or the body of a statue the nature of the emotion, its degree, and all those gradations of the external and of the internal medium. Any one can succeed in representing a laughing child, a dying man ; but there is but one Laocoön, and but one Inconsolable.

The general forms of expression are as follows—

Feeble, strong, violent expression ; uncertain, confused, evident expression ; expression of tension, of expansion ; debauched and dying expression ; disturbed and convulsive expression.

To end our attempt at classification, we have only to point out the analogies, the most frequent cases, in which very different psychical facts of nature are expressed by the same, or at least by a very similar phenomenon. The great part of these agreements, *synonyms* of expressions, are in great part here indicated for the first time, and may afford us valuable help in disentangling some of the most obscure laws of human and animal psychology.

Synonyms of Expression.

- Extreme degrees of voluptuousness and of pain.
Pleasures of smell and amorous voluptuousness.
Pains of smell and expression of disdain.
Pains caused by bitterness and the dumb suffering of self-esteem.
Pleasures and pain of hearing—emotional pleasures and pains.
Pleasures and pains of sight—intellectual pleasures and pains.
Traumatic pains and expression of moral struggling.
Pleasure of feeling well and complacency of self-esteem.
Expression of luxuriousness and cruelty.
Expression of modesty and chastity.
Pains of cold and fear.
Pains of heat and expression of rage.
Expression caused by tickling—pleasures and pains of ridicule.
Expression of intestinal pains and disgust of life, or hypochondria.
Wonder and fright.
Panic, fear, and madness.

CHAPTER IX.

THE EXPRESSION OF PLEASURE.

PLEASURE is one of the most universal and elementary emotions of all living beings. It is one of the poles of animal, and perhaps of vegetable, sensibility. And thus its expression is rich, varied, and characteristic, and one which, it would seem, should have been the first to attract and engage the spirit of observation of the curious who were first to direct their attention to man in order to study his movements. And yet it was not so: the old works of physiognomists only devoted a few pages to laughter, which seems to have been to them the only expression of pleasure worthy of being studied; and yet in these pages we shall find more astrology and cabalism than genuine and attentive observation. Physiognomy has been an astrological science from its birth, and this original sin has been perpetuated to our own days, for nowhere has a saviour appeared to cleanse and to heal it.

The good Cornelio Ghiradelli, of Bologna (the eminent Vespertine academician), in the eighth discourse of his *Physiognomical Cephalogia* (Bologna, 1670), treats of the *Laughing mouth and soul breath* (a singular association). He there quotes Aristotle, and distinguishes between the *moderate laughter of a wise man and the immoderate and unruly laughter which Cicero calls cachinnus, and which is peculiar to fools*. And he continues thus—

“Laughter is an inarticulate sound produced by the pleasure which one feels at a thing done or said in a ridiculous manner, or which is monstrous or very imperfect. We say, then, that moderate laughter is a sign of wisdom, of

serenity, and sprightliness. Immoderate laughter, on the contrary, is a sign of folly or stupidity. Excessive and prolonged bursts of laughter were displeasing to Seneca, to Pythagoras, and to Plutarch, and should be an abomination to every wise and prudent man.

“The Emperor Heliogabalus laughed so loud that when at the theatre his laughter rose above that of the whole crowd. And Boccaccio has said of such laughter: Master Simon laughed with his throat so far open that it would have been easy to have pulled out all his teeth.

“Democritus was surnamed Gelasinus, because of his inextinguishable laughter; laughing continually at everything, he enlarged his mouth up to his ears; his teeth were always seen; his face always wrinkled with smiles. Of him Juvenal said—

“*Perpetuo risu pulmonem agitare solebat*

Democritus. . . .

“Zoroaster, the inventor of magic, was born laughing, as Pliny attests, lib. vii., cap. xvi.

“He who laughs out loud is brazenfaced, says Rasi; and those who laugh till they cough or so as to lose their breath are tyrants. If the voice alters in laughing, says Michael Scot, it is a sign of arrogance, of avarice, of tyranny, of falsehood, and of treachery.

“He who has thin lips, and with a joyous face laughs little, will be voluptuous; the mouth which is always laughing is the sign of a wicked, lying, perverse, dissimulating, and malicious man, whom no one should trust, says Albertus Magnus, for laughter in the mouth, corresponding to the eyes, is always bad, and is proper to women.

“Moderate laughter indicates a benevolent, conciliatory man, prudent in all, says Rasi. Michael Scot says they are skilful, sagacious, of keen minds, intelligent, and industrious.

“Isocrates writes that Plato had such grave manners, and showed so much reserve in his face, that he was never seen to laugh, as too was the case with Clazomenes. We read

that Crassus was of so severe an aspect, and of such austere manners, that he never laughed in his life."

The Jesuit Niquetius,¹ in his chapter dedicated to laughter, after many quotations nearly always in its favour, already gives us a little bit of physiology—

"... repentina fit dilatatio cordis ac magna vitalium spirituum effusio quae confestim musculos thoracis et diaphragmatis concutiunt et titillant, ad motum harum partium sequitur motus muscularorum, qui a lateribus buccæ sunt, fitque illa oris deductio, quam risum vocamus, idque ad exprimendum animi gaudium; de his, qui plura volet, legat præclarum tractatum Elpidii Berretarii Priscensis de risu.

"Ad risum proclives maxime sanguinei et cholericí quia calidores sunt et apud Græcos risus dicitur γέλως ab ἔλη, id est calor."

Niquetius disputes the ancient opinion according to which the spleen is the cause of laughter, an opinion which arose spontaneously from the pain felt in the spleen after excessive laughter, or perhaps imagined as a pendent to the theory which makes the liver the seat of pain—

"*Cor sapit et pulmo loquitur, fel commovet iram.*

"*Splen ridere facit, cogit amare jecur.*"

And elsewhere—

"*Quid faciem? Sed sum petulanti splene cachinno.*"

Having exhausted his small store of physiology, Niquetius does as others do and falls back upon pure cabalism—

"Pueri, mulieres, fatui ac quilibet inexperti facile rident quia illis omnia nova ac novitas risum facit. Tyrinthii, quum φιλογλυπτες essent, et hoc nomine a vicinis male audirent, Delphicum oraculum consuluerunt Respondit Pythia ita tandem eos hoc malo liberandos, si Neptuna taurum immolarent et cum αγέλαιοι in mare projicerent;

¹ *Honorati Niquetii e Societate Jesu, Sacerdotis, Theologi Physiognomia humana. Libri iv. distincta, editio prima. Lugduni, 1648.*

illi, re deliberata, pueros omnes hoc sacrificio abegerunt
ne quod esset ridendi periculum. . . .”

A little-known Spanish writer¹ had launched his shafts
against the excessive laughers before Ghiradelli and before
Nquietus—

“Those who laugh easily and in great bursts have large
spleens, and are naturally foolish, vain, stupid, inconstant,
and indiscreet.

“Those who laugh little and with moderation are
prudent, astute, discreet, loyal, constant, and of brilliant
intelligence.”

I will not cite Cicero, who said in his *Tusculanes*—²

“*Si ridere concessum est, vituperatur tamen cachinnatio.*”

Catullus had also said more severely—

“*Risu incepto res ineptior nulla est.*”

But earlier than the philosopher and the poet, Ecclesi-
asticus had proclaimed—

“*Fatuus in risu exaltat vocem suam, sapiens autem vix
tacite ridebit.*”

And in Proverbs—

“*Risus abundat in ore stultorum.*”

To all these wiseacres and proverb-makers I should like
to present our contemporaries Vogt and Pasquale Villari:
the former is fat, the latter is thin; both are men of genius;
both laugh continually and heartily. Vogt, who has two
enormous lungs above the diaphragm, and an enormous
stomach below, laughs till he shakes the house and
endangers its solidity. In this he reminds us of Balzac,
who, like him, had a big stomach, and whose laughter
shook the window panes.

The astrological and divination tendency has been per-
petuated into our own days. If you open at hazard the

¹ Hieronymo Cortes, natural de la ciudad da Valencia, *Phisonomia y
varios secretos de naturalera.* Barcelona, 1610.

² *Tusculan.* lib. iv. See also *Clement of Alexandria, Pædagogia,*
lib. ii., cap. v.

first volume to hand of a common physiognomist—for example, Lepelletier—you will find statements of this sort—

“*Noisy and prolonged laughter.*—. . . Having made a sufficient number of careful observations, we shall not hesitate to acknowledge that this sort of laughter, if we suppose it to be natural, indicates the following moral conditions: The most ordinary intelligence; a light, futile, heedless, versatile, jovial mind, with little inclination for the serious; a simple, ignorantly wondering character, sometimes utterly stupid (poor Balzac !), common, coarse, ill-taught, without reserve, without dignity (poor Vogt !), attracting attention everywhere, and nowhere appreciated; intemperate, sensual, greedy, nearly always led away by the more or less vicious impulses of instinct, rarely subject to the wise promptings of reason (poor Villari !).”

Enough. The true physiology of laughter begins with the great naturalists and great biologists of our own time.

Among them the first place belongs to Darwin, who has investigated the first forms—the dawning of laughter in the animals which most resemble ourselves.

The chimpanzee is sensitive to tickling; under this stimulus his eyes become brilliant, the corners of his mouth are drawn backwards, his lower eyelids slightly wrinkled; and at the same time he emits a sound which corresponds to our laughter. Tickling produces the same effect in the orang-outang. Duchenne several times observed a sort of smile in an ape when he offered him a tempting morsel. The *Cebus Asarae*, when he is pleased, emits a peculiar murmur, and the corners of his mouth are contracted backwards. An analogous expression has been observed in the *Cebus hypoleucus*, and in the *Inuus ecaudatus*. Darwin has also observed the expression of pleasure in two or three species of *Macacus* and the *Cynopithecus niger*. The former throw back their ears and emit a peculiar sound; the *Cynopithecus* draws backwards

and upwards the corners of the mouth and all the skin of the head in such a way that at the same time the eyebrows are raised. And in this movement he shows his teeth.

I have also seen the ouistitis of Brazil, which I have had with me for several months, express their joy by throwing their ears backwards and raising the corners of the mouth.

Such are the rude beginnings of the human expression of joy. The expression of this is very rich, and we will decompose it into its elements according to the method which we have already adopted for pain.

SYNOPTICAL TABLE OF THE EXPRESSION OF PLEASURE.

Muscular contractions of the face and respiratory muscles.	Elevation of the corners of the mouth (smiling).
	Wrinkling of the lower eyelids and of the neighbourhood of the eye.
	Inflation of the cheeks.
	Dilatation of the wings of the nose.
	Laughing.
	Closing the eyes.
	Throwing back the eyeball.
	Grinding of the teeth.
	Trismus.
Muscular contractions of the neck, the trunk, and the limbs. Convulsions.	Rhythmic movements of the neck.
	Elevation of the shoulders.
	Diverse contortions of the trunk.
	Diverse expressive movements of the arms.
	Clapping with the palms of the hands.
	Stretching the legs apart.
	Stamping with the feet.
	Various sorts of springs.
	Dancing.
Vasomotor and sensitive phenomena.	Convulsions of an epileptic nature.
	Blushing of the face, and more rarely of the whole body.
	Pallor (rare).
	Sparkling of the eyes.
	Tears.
	More abundant salivation.
	Involuntary emission of urine.

	Sighs.
	Rattle.
	Cries.
Disturbance of the voice and psychical phe- nomena.	Noise similar to that of snoring.
	Sobs.
	Singing.
	Dumbness.
	Fluent and unaccustomed eloquence.
	Delirium.
	Unaccustomed benevolence.
Phenomena of paralysis.	Paralysis of some or of all the muscles of the eye.
	Strabismus.
	Fall of the lower jaw.
	Swooning and syncope.

If instead of an essay I were writing a treatise on physiognomy and on the expression of the emotions, I should have to study all these elements expressive of pleasure one by one, elements which in reality may be seen either isolated or grouped together in diverse ways. I shall content myself here with a rapid examination of the most common and most characteristic.

The first of all is the raising of the corners of the mouth, always accompanied by certain wrinkles round the eye and an inflation of the parts of the cheeks nearest to the nose. These three movements combined constitute the smile, which may be hardly perceptible, and which passes by insensible degrees into laughter. This mechanism, characteristic of pleasure, may be studied by following the development of a tactile sensation which approaches the voluptuous. Scarcely is pleasure manifested than the elevator muscles of the upper lip irresistibly contract and the smile appears. The rough artists of the most savage peoples have observed this. I possess two Maori idols which express the two fundamental images of pleasure and pain. I should have reproduced them in this book had not two large fig-leaves been necessary to conceal certain details of these coarse wooden statues. In the one representing pleasure, the

corners of the mouth are raised ; in that representing pain, they are, on the contrary, drawn downwards. As soon as the smile is accentuated, and the large zygomatic muscles strongly contracted, wrinkles are formed round the lower eyelid. In adults and old people they also form at the outer corner of the eye. At the same time the eyebrows are somewhat depressed, which proves that the upper part of the orbicular muscles contracts as well as the lower. When the smile is very marked, and still more when one laughs, the cheeks and the upper lip are inflated, the nose seems to get smaller or, rather, shorter, the upper incisors are shown, and at the same time a naso-labial wrinkle forms which passes from the wings of the nose to the corner of the mouth. In adults and old people this wrinkle is double.

In very marked smiling, and still more in laughing, the eye becomes brilliant, because the lachrymal secretion is more abundant, and it appears larger, perhaps because it is expanded by the contraction of the orbicular muscle, perhaps (as Piderit admits) because the eyeball contains more blood and other humours.

In addition to these phenomena a feature of laughter is the deep inspiration, followed by a frequently interrupted expiration and accompanied by a peculiar and characteristic noise. This is always an accompanying phenomenon of the diffusion of any expression which passes from an inner muscular centre to an outer concentric circle. As the pleasure increases, and with it the emotion is augmented, the muscles of the face no longer suffice for its expression : the diaphragm and the respiratory muscles of the thorax come to their aid.

In laughter, the mouth opens more and more, many of the teeth are exposed, until, the emotion always increasing, the muscles of the limbs and of the trunk take part in the performance, as much to discharge the centrifugal current which is developed as to protect the viscera of the belly.

which are too violently tossed about by the rapid and energetic contractions of the diaphragm. It is then that the head is thrown back, afterwards the trunk ; that the face and neck get red, that the veins swell, that the eyes are flooded with tears which even flow over the cheeks. At the same time, the hands are carried to the side of the chests, over the epigastrium or other parts of the belly ; sometimes one may rest the whole abdomen against a wall or against any resisting body, or may roll on the ground.

Laughter, which in its initial stages is pleasant, may become so violent, if prolonged, that it constitutes a veritable convulsion impossible to dominate even by an effort of the will. It is then that great pain may be felt at the nape of the neck, and unpleasant sensations in the belly and at the diaphragm, and that there may be a loss of urine ; the latter is more frequent with children and with women.

Darwin was able to verify that this laughter to the point of tears is found among Hindus, Malays, the Dyaks of Borneo, Australians, Kaffirs, Abyssinians, and among the Aborigines of North America. For my part, I have seen it in many negroes of different tribes, and in the Indians of South America.

The great English philosopher asked himself whether laughter was an exaggeration of the smile, or if the latter was the last vestige of an ancient hereditary habit—that of laughing boisterously. I think it probable that both laughter and smiling are as ancient as man, and that either is produced according to the degree of the emotion. We have a proof of this in the fact that children smile before they laugh. In my five children the first smile appeared forty or sixty days after birth, while laughter was manifested, at the earliest, in the third month. One of the sons of Darwin smiled at the 45th day, and laughed at the 113th. Another of his sons smiled at the same age, and a third some days earlier.

Laughter is the most characteristic expression of the pleasure of ridicule; but it also accompanies tickling and pleasures which are affecting in their acute stage. Voluptuousness only very rarely provokes laughter, and only in its paroxysms; then it is but a spasmodic or cynical laughter, accompanied by a sort of rattle or gnashing of the teeth.

Children and women laugh more than men and adults, because they are more excitable, and the moderating power of the cerebral hemispheres is less. When in perfect health we laugh at a trifle; when in ill-health or bad humour nothing can succeed in calling forth a laugh. Laughter is frequent in idiots and in certain special forms of mental alienation. If we add to this that many people, devoting their life to profound study, or to the search after an elevated ideal, are necessarily serious, we shall see the reason, or rather the excuse, of the proverb according to which *Risus abundat in ore stultorum*.

We have already seen that certain great men laugh readily and noisily; but it is right to add that laughter corresponds more closely to the moral character, and to the condition of health, than to the degree of intelligence. The haughty, the vain, the awkward laugh little so that they may not compromise their personal dignity. I think that the serious character of the Spanish nation depends on this. Also the envious, the wicked, the malevolent rarely laugh, because they are impregnated with bile, and are always morose. To think, to do, to remember evil, such is the daily occupation of those unfortunate beings who are always constrained to hate and to censure. And all this is the very opposite of laughing.

Laughter, easy, copious, and frank, indicates a good soul devoid of vanity. This is one of the least misleading axioms of physiology. The hypocritical education of our age teaches us to restrain the expansion both of grief and of joy, and we grow unaccustomed to open-hearted laughter. Add to that that many ladies laugh little lest they should

have precocious wrinkles, while others laugh too much, and on every pretext, that they may show their beautiful teeth.

Cynical, strident laughter may sometimes be the expression of hatred or intolerable suffering ; but it should never be confounded with joyous laughter. The sound may be the same ; the diaphragm and the thoracic muscles present the same contractions ; but the face has quite a different expression, and we stand aghast before a picture which combines the least harmonious colours and the most horrible grimaces. Thus the famous “laughter of the damned” is one of the battle-horses of theologians and preachers. It is an expression taken from nature.

Laughter and smiling are very expansive forms of expression. The character of expansion is truly one of the most general characters of all agreeable manifestations. This is so true that the oldest observers, even the most superficial, were compelled to notice it.

Ghiradelli says that pleasure extends even to oysters and to sponges . . . “to zoophytes and animate plants, like the oysters and sponges, which contract as an effect of pain, and which dilate with joy to the point of opening.” And Niquetius, in his first description of laughter, writes—“Voluptatis primus et maxime proprius effectus est dilatatio cordis sanguine et spiritu ad exteriores partes copiose effuso, unde et nonnullos gaudio, propter nimiam spirituum jacturam, mortuos esse legimus. . . .”

The first movement of pleasure is expansive, centrifugal ; the first movement of pain is centripetal, as though one entered into oneself.

Joy makes us hurry from the house, pain makes us enter it ; joy makes us open the window, pain makes us close it. Joyous, we seek light, movement, noise, men ; unhappy, we want darkness, rest, silence, solitude. It is a general law which admits of exceptions, like all others ; but these exceptions are easily explained by the action of disturbing causes. It is a law which governs individuals and societies, and

which should inspire art. Stand at the window: look at this group of men, women, and children who gather round something which you cannot see. They are silent, motionless; for a catastrophe has occurred; they are looking at the corpse of a man who has committed suicide. Another time, at the same window, you see a tumult, people who are shouting and dancing: all is movement, all is uproar; for it is a holiday, and joy is carrying them all away in a tumultuous storm of muscular expansion.

I have studied in my children the effect of a sudden joy. After the momentary immobility caused by surprise, they laugh and at the same time stamp their feet in cadence, clap their hands, jump, dance, although they may never have witnessed a like expression in any living being.

Look at a child who has just been given a new and desired plaything; he will jump first on one foot, then on the other; he claps his hands in cadence. This beautiful picture of infantine joy reveals to us one of the first sources of music, perhaps one of the most wonderful creations of the human brain. Pleasure has engendered music, music by a marvellous reaction gives birth to pleasure, and this in its turn expresses itself in rhythmic muscular movements, which are the alphabet of dancing. From the cadenced beating of the feet and hands to the invention of the tambour, the tambourine, and the cymbal, there is but one step. The savage but rhythmic noise revives joy and creates music, which in its pathological forms brings us back to a savage noise. Darwin having asked a child less than four years old what it understood by good humour, the child replied, "It means laughing, talking, and kissing," thus revealing to us in its naïve reply a chapter of psychology.

In the explosion of joy the affective sympathies awaken by their influence the most excitable parts of our brain, those where the condensed energy is always ready to find vent in expression. Thus Petherick said the negroes on the Upper Nile rub their stomachs as they looked at certain

coveted glass wares ; and Leichardt said the Australians alternately open and close their mouths, as though they were enjoying the flavour, as they admired his horse, bulls, and especially his dogs. Thus it is that the Greenlanders gulp in the air when they are pleased, as though they were swallowing a delicious morsel. To these facts I shall add others which confirm this law in different domains. Libertines, to express any pleasure, lick their lips, caress their cheeks, or have recourse to some other sexual expression ; and people passionately fond of music give a harmonious expression to every joy.

Among the elements of the expression of pleasure enumerated in our analytical table, some are characteristic of sexual voluptuousness. I will mention among these the turning upwards of the eyeball, so as to hide the cornea, the gnashing of the teeth, trismus, epileptiform convulsions, sighs, rattle, groans, bellowings, sobs, and such like ; these phenomena are among the more bestial—that is to say, the more automatic and irresistible—and education exercises on them but little or no influence. Here the intelligent man is completely submerged in the great sea of the animal fraternity : the horse, the ass, the man have often the same way of expressing erotic enthusiasm.

The different movements expressive of pleasure may be grouped in such a way as to form pictures characteristic of certain emotions or special conditions of our organism.

I shall mention here some of the most known and the best defined, that they may serve to guide the artist and the psychologist.

Physiognomy of Good Humour.—When health is perfect, when no care troubles our serenity, to feel oneself living is a pleasure in itself. This pleasure is expressed by an expansive smile ; by a permanent tonicity of the muscles of the face and slight brightness of the eyes. It is the face of children in good health ; it is the joyous expression of a brave man who is well. Before such beautiful

representations of life we cry—What a laughing face! What a picture of contentment! It is a pleasure to look upon it!

Physiognomy of Tumultuous, Delirious, Mad Joy.—This is seen in sudden and violent joy, especially when the mind is not prepared for it. The emotion spreads tumultuously and rapidly from one circle of expression to another. Smiling and laughing, convulsions and cries, song and dancing scarcely suffice to provide for the letting off of the continuous and vigorous currents which rise from the nerve-centres. An almost constant character of this expression is to transform the affective energy into acts; there is felt an irresistible necessity to embrace, to kiss whatever is near, whether it be an animal or inanimate object. The artist must never forget the force of expression which accompanies muscular disturbance in representing human joy.

Physiognomy of Satisfied Pride.—When man rises in the scale of rank, whether by his money-bags or in a vanity-inflated balloon, he experiences an intense and continuous joy which impresses a permanent and very characteristic expression on his physiognomy. Just as a cat bristles up her fur and inflates herself to appear larger and to frighten a dog who threatens her, so a man, full of pride, satisfied at the rank in which his eye finds itself, inflates his cheeks, breathes frequently and powerfully, sticks out his paunch, if he has one, the anterior part of the abdomen if he is thin, holds up his head, walks noisily—in a word, he seeks to appropriate as many of the sun's rays as he can, and to attract in every fashion the attention of his inferiors. It is not without reason that in every language inflated signifies proud, and to inflate oneself, to grow proud.

A Joyous, Epicurean, Bacchic Physiognomy.—This is the exaggeration of good humour, with a strong tinge of sensuality, brute stupidity, and libertinism.

All gradations are possible, from the lowest expression of gluttony to the higher and universal epicureanism. A

gleaming and warm skin ; a half-closed mouth, always expectant of light kisses or savoury morsels ; half-opened and slightly troubled eyes, looking into space as though for ever contemplating smoking stew-pans and tender viands ; the heavy murmur of a turgid blood below a satisfied and still more turgid stomach ; the beatitude of a naked Silenus borne on the shoulders of naked Bacchantes ; the tempestuous bubbling of a painful digestion ; a peaceful sloth of ideas ; perpetual desires of well-filled tables and well-warmed beds ; a reverie of kisses and liquors ; a bestial fermentation in the great vessel of human life. Such, broadly sketched, are the anatomical and expressive features which have inspired artists in their creations of Bacchus, Silenus, and certain Don Juans.

Some of these pictures may represent permanent expressions : others only correspond to passing states. The expressions of tumultuous joy and of voluptuousness are transient ; on the other hand, a bacchic expression, that of satisfied pride, and, above all, that of good humour, may be permanent.

If an artist wished to portray in five large pictures the different periods of human life, represented by their most characteristic joys, the following lines might inspire and guide him :—

1. *Infancy and Childhood*.—Good humour, consciousness of perfect health.
2. *Adolescence*.—Heedlessness, muscular intoxication.
3. *Youth*.—Joys of love : contemplation of the world through rose-coloured glasses.
4. *Adult Age*.—The pleasures of strife and of satisfied self-esteem.
5. *Old Age*.—The tender joys of affection, and the melancholy of tender memories.

While studying the expression of pleasure I have been able to note the same law which I had already noted in the expressions of pain. I have found that the pleasures of

specific senses had an identical or analogous expression to those of other emotions from a different or higher origin.

The specific pleasures of sight, as some of the more elevated joys of the intelligence, are expressed by widely-opened and brilliant eyes, by the head held upright and attentive. Study the attitude of any one contemplating a beautiful scene in nature, and you will recognise that it is like that of the poet who creates and of the philosopher who is seeking.

Examine, on the other hand, the concentration of one who is enjoying good music. You will see that his expression is in every way similar to that of the tenderest joys of the heart. Let a painter go into a theatre when Patti is singing, and the atmosphere vibrating with the sweetest accents of Donizetti or Bellini; let him watch in turn the faces of the audience, and he will find there pictures of wondrous beauty.

The expression of the pleasures of taste is very coarse; but there is none the less its analogue in the expression of the joy of wealth; perhaps because the mouth is the slot of our money-box, and receives the tribute of all our receipts, and because the tasting of a delicate morsel is very like the pleasure of fingering gold and bank-notes.

The pleasures of smell have an expression almost identical with that of voluptuousness; doubtless because this sense and the genital organs are in close connection.¹ Make the chastest woman smell the flower whose odour she likes best, and note her expression. Without willing or knowing it, she will close her eyes and breathe deeply; and if she is very sensible, she will tremble through her whole body.

The passion of certain toothless old people for snuff is certainly a pleasure of smell. But this exception confirms the rule, for at the bottom of this gross expression there is always a sensual tinge which recalls forms of sexual pathology.

¹ Mantegazza, *Fisiologia dell' amore*, p. 176.

For the rest the pleasure of snuff is not only concerned with smell, but also with touch, and includes a narcotic effect.

The pleasures of touch are confused with those of voluptuousness, and constantly present an analogous expression. But they are nearly always complicated by a muscular exertion, which gives to these pleasures an expression identical with, or at least similar to, that of resistance, action, strife.

For this reason artists would do well more frequently to visit the workshops of smiths, carpenters, turners, and all workmen who employ their hands in transforming and fashioning material. In these pictures of expression they will find abundant material for their highest inspirations.

It is in the lower part of the face, and still more round the chin, that the expression of character and of action is concentrated. The play of this centre of expression follows in sympathy the intelligent and rhythmical movements of the carpenter, of the smith, of the turner. It is almost impossible to plane, to saw, to bore, without the face assuming an active expression of work and energy. Certain workmen who are very expansive or very nervous present sometimes, while in the performance of their manual labour, heroical expressions which the artist would find again on battle-fields and in parliaments, if on these rare occasions, in these bloody combats or strife of words, it was possible to maintain that composure and the spirit of observation which, on the other hand, are very easily preserved in the workshop of a turner or of a smith.¹

¹ Mantegazza, *Fisiologia del piacere*, p. 10. Milan.

CHAPTER X.

THE EXPRESSION OF PAIN.

IN my *Physiology of Pain*, published at Florence, and illustrated by an extensive atlas of photographs, I devoted the fourth part of the work to the study of the expressions indicative of pain. In these pages I collected the fruit of long and patient observations, and of many cruel experiences. Here I shall but broadly indicate the most important conclusions, in order that these chapters on expression may not present a deplorable lacuna. When a man has consecrated all his life to the study of man, he is obliged to touch upon the same subjects again in the different works which he publishes, and some repetitions are inevitable.

The expressions of pain are extremely numerous : but they may be summed up in the following table :—

SYNOPTICAL TABLE.

Muscular contractions	Of the face. Of the trunk. Of the limbs. Of the cremaster. Of the elevators of the hairs. Partial General Tonic Clonic Trembling.
Paralyses.	{ Of certain muscles of the face. { Of the limbs. { Of all voluntary movements.

Respiratory troubles and sounds.	Voluntary suspension of respiration. Involuntary ,, ,, Prolonged expiration. Interrupted expiration and inspiration Sighing. Yawning. Complaining. Sobbing. Groaning. Cries.
Troubles of the secretions and of digestion.	Tears. Involuntary loss of saliva. Involuntary emission of urine. Vomiting. Diarrhoea. Perspiration.
Peripheral vasomotor phenomena.	Paleness of the face. ,, of the whole body. Blushing of the face. Urticaria. Erythema. Erection.
Psychical troubles.	Unwonted benevolence. Access of passion and hatred. ,, ,, religious feeling. Dumbness. Voluble and unwonted eloquence. Delirium. Rhythm of thought and of word.

It is seldom that these elementary forms of the expression of pain occur isolated in nature ; they are nearly always combined in different ways, forming certain pictures which resemble each other more or less according to the nature of the suffering, and still more the character of the patient.

Expressions of reaction.

Expressions of paralysis.

Mingled expressions of pain and of the feeling which has produced or which accompanies it.

Expressions of Reaction.—These are the most common; they accompany all slight pains, and the beginning of great pains. The centrifugal currents escape along the different nerves, and produce there an infinite number of movements: contractions of the facial muscles, agitation of the limbs and of the trunk, complaints, sighs, sobs, erection of the hair, threatenings to real beings either present or absent, or even to imaginary beings.

All this complication of movements has a twofold object —to release the nerve centres from the excessive tension which afflicts them, and to struggle with the pain.

Expressions of Paralysis.—These are nearly always caused by over strong or protracted pains. Sometimes the suffering is so unexpected and so violent that it produces paralysis without reaction, and one may be suddenly smitten with swooning, syncope, and finally death.

Outside these cases, which, happily, are exceptional, the prostration of grief is expressed by yawning, by paleness, by involuntary losses of saliva, of urine, of faeces, by the dejection of the face.

Mingled Expressions of Pain and different Feelings.—The diversity of the effects which pain produces on the muscles of the human body comes generally less from the degree of this pain than from the feeling which produces or accompanies it. Thus, by the gestures of a man in pain, we rapidly guess whether he is suffering from a tooth or a corn; in the same way, paternal affection, self-esteem, and the feeling of propriety when wounded unite their own particular expression to the expression of pain.

Muscular Contractions.—Disregarding the very rare cases in which a general paralysis is suddenly provoked by an excessive pain, the expression of pain may be said to be always accompanied by muscular contractions. These may be limited to a small number of the muscles, or to several groups, or extend to all the voluntary muscles in such way as to simulate tetanus, or a general convulsion.

Different circumstances may contribute to make one muscle contract rather than another, but that depends especially on the seat, on the nature, and on the degree of the pain.

The muscles which serve most frequently to express suffering are those of the face, then those of the neck, of the trunk, of the upper limbs, and finally those of the lower.

The most frequent contractions are those of the superciliary muscles, and of the depression of the lower lip; also the wrinkling of the brow and the depression of the mouth are among the most constant signs of the greater part of the expressions of pain.

The contraction of the muscles used in mastication is also very habitual, and gives to the mouth a character of resolution and haughtiness. While the mouth closes with energy, the hand closes also, and in the gravest cases, both hands.

Convulsions are oftenest seen as the expression of pain in the extreme paroxysm of moral suffering, and nearly always coincide with the complete collapse of patience, of dignity, and of many other virtues. Here are some forms of these convulsions expressive of pain—

The alternate raising and lowering of the lower jaw, but without the teeth meeting.

Spontaneous fibrillar contractions of many muscles of the lower limbs, of the arms, and also of the trunk.

Partial convulsions of the muscles of half of the face, after which the mouth is left awry.

Convulsions of the frontal and ocular muscles.

Convulsion of the superficial muscle of the neck, and of the sterno-mastoids.

Clonic convulsions of the abdominal muscles.

Trismus.

Different forms of tetanus.

Hysterical projections of the limbs and trunk.

Paralysis.—This always accompanies intense and pro-

longed pains. It must be that in one way or another the nervous energy should be sufficiently exhausted to momentarily suspend the faculty of innervation. One of the simplest forms is an inability to close the mouth; one of the most complex and the gravest is the relaxation of all, or of nearly all, the muscles of the lower limbs and of those which keep the body straight.

Troubles of Respiration and Cries.—Respiration is one of the functions most deeply disturbed by the action of pain. As it is discharged by means of certain movements, the disturbances which it undergoes indirectly become the expression of our suffering.

When the moderating influence of the cerebral hemispheres is at its maximum, we have: the voluntary arrest of respiration, the exaggeration of the act of inspiration, spasmodic contraction of the diaphragm, of the scalenes, of the external intercostals, of the sternal portion of the internal intercostals, of the elevators of the sides, of the serratus posterior, of the sterno-mastoid, and, in the case of supreme struggling against pain, the energetic contraction of the elevator of the angle of the scapula, of the trapezium, of the little pectoral, of the great pectoral, and of the serratus magnus.

When the moderating influence of the cerebral hemispheres is very weak, we have, on the contrary, a rapid, gasping respiration, tumultuous movements of the voluntary muscles, an exaggeration of the act of expiration, a spasmodic contraction of the internal intercostals, of the infracostals, of the triangular muscle of the sternum, and also, in the gravest cases, of the external oblique, of the internal oblique, of the transversalis and of the sacro-lumbar muscles.

Sighs, Groans, Cries, Yawning.—The sigh is generally an element expressive of pain, even though it also accompanies some of the most vivid erotic or affective pleasures. But most frequently it interrupts from time to time long and

dumb grief, and is a sign of moral, rather than of physical, suffering.

The sigh has only to be raised a tone to become a groan, which generally accompanies, while prolonging, expiration.

The groan may become a cry, but this cry is nearly always the automatic and spontaneous expression of very acute physical pains, or of intense and sudden moral pain.

Yawning expresses the most different things, such as hunger, thirst, and, especially in women, the need of physical love; but in the expression of pain it is an element which is expressive of weariness.

Weeping.—This is an element of the expression of pain which at once embraces the whole field of muscular disturbances, and invades that of the secretions. In fact, we find therein at once the contraction of several muscles of the face, of the thorax, of the belly, and an abundant secretion of tears, which, overflowing the lachrymal duct which should lead them into the nostrils, issue over the lower eyelid and flow down the cheeks.

Darwin has studied with much tact the expressive mechanism of tears;¹ he has remarked that in children tears are often preceded and accompanied by an intermittent and spasmodic occlusion of the eyelids, from which results a tolerably strong compression of the eye, which, according to him, effects its protection from excessive sanguine congestion.

Peripheral Vasomotor Phenomena.—The pallor of the face, and sometimes, but rarely, that of the whole body, accompanies sudden terrors, the announcement of great misfortunes, and also acute and rapid physical pains.

Redness of the face always accompanies the weeping of the child; but it is often also observed in youth and in the adult.

¹ Darwin, *The Expression of the Emotions in Man and Animals*, p. 147. London, 1872.

Men and women express their pains differently, even when they are of the same degree. The differences become greater in proportion as we rise in individual and ethnical rank.

Generally grief is translated in women into stupor or violent reactions ; tears are very frequent. The masculine temperament, more courageous and energetic, gives to a man's expression of grief the character of resistance. The man who suffers protests against pain ; he utters threats and imprecations on nature and on God. The closed fist stretched towards heaven is the virile expression of some very intense pains. In the woman, on the contrary, the compassionate form prevails, and the groan is the most habitual form of expression.

In women the predominance of benevolent and religious feelings gives to the expression of pain the character of pity and of charity. In man, on the contrary, egoism prevails even in the domain of the passions. The woman who suffers, prays and performs acts of charity ; the man most frequently blasphemes and menaces.

Age, still more than sex, modifies the expression of pain. Little children only experience physical pains, which they always translate in the same way—by tears and cries.

When self-love, jealousy, the love of property, have appeared in the child he becomes capable of experiencing more pains ; he continues to express them by cries and by tears, but his tears flow in different ways, sometimes continuously, sometimes intermittently ; sometimes he only whines, sometimes he sobs.

In proportion as the child grows its expression of grief acquires new characters ; tears are less frequent and replaced in part by sighs, sobs, groans, and cries. In the more intelligent, as the dawn of expressions of a more elevated order, we note the appearance of the sardonic or ironical laugh, or a melancholy sadness. These forms, already very æsthetic, become more and more refined in the

period of adolescence and first youth, and attain during this time of life to supreme beauty.

The young man weeps but very rarely ; the mature man has ordinarily completely unlearnt the habit. But directly the nervous centres are weakened a tendency to tearfulness is noted in the eyes, which signifies the first steps in the descent of the parabola of life.

Generally concentric, mute expressions with feeble reaction are proper to adult age, because then experience has rendered us less sensitive, or because self-esteem and the sense of our own dignity intervene to moderate the expression of pain. Tears, without sobbing, without any visible trouble of respiration, are one of the most frequent pictures of intense grief in adult age.

In old age, tears which flow readily, hoarse and plaintive lamentations, cowardly dejection, are the habitual expressions of pain, although growing egoism and the diminution of sensibility tend to balance the progress of weakness.

If it were necessary to reduce to a few pictures the most characteristic expressions of grief at different ages, I should make the five principal types—

1. *Childhood*.—Cries without tears, abundant weeping.
2. *Adolescence*.—Calm and melancholy sadness.
3. *Youth*.—Menacing reaction.
4. *Adult Age*.—Expression of bitterness.
5. *Old Age*.—Plaintive groans and tears.

In attentively observing the expressions of pain of the different specific senses, one may discover a new law which explains many obscure facts of human expression and of the highest psychology.

The specific pains of the senses take their form from the special nature of the offended organ ; their expression shows the artifices of defence as well as the other laws of sympathy which connect each sense with a given region of the brain, and, in consequence, of feeling and of thought.

Too bright a light, a want of harmony in colours, directly

offend the eye. We express this specific pain in the most natural way by closing the eyes, folding the eyelids tightly, and at the same time contracting the muscles which are in anatomical and physiological relations with the orbicular of the eyelids. This expression closely resembles that by which the intellectual pains of the most elevated nature are manifested. When we see an ugly statue, an ugly picture, it is not the retina which is directly offended, it is the still unknown cerebral centre whence æsthetic energies emanate. As the pictures and statues are the first origin of the æsthetic pains, we express these by closing one eye, perhaps both, as though we were offended by too strong a light. The same thing happens when we see or when we hear a solemn foolery, unless by contrast it make us laugh.¹

It is then a law that the expression of visual pain is very analogous to that of intellectual pains, and that because the eye is the most intellectual sense, the most fertile source of ideas.

If we pass to the other specific senses, we see the same law verified. Hearing is the sense most intimately and closely associated with feeling ; thus the expression of the specific pain of hearing is identical with that of the most cruel wounding of our affections. In my *Atlas of Pain* I have caught the transient expression of the sudden suffering of a very sensitive young man, caused by the scratching, which he suddenly perceived, of my ten nails against the window pane.

It is then proved that the specific expression of auditory pain agrees with those of the benevolent feelings, or, as it is termed in ordinary language, of the affections.

The analogy between the expression of pains of the senses and of moral pains becomes still more evident when we study the expression of the nose.

Under the impression of a very ill odour the nostrils

¹ Mantegazza, *Atlante dell'espressione del dolore.*

close, the lower lip is raised, and we involuntarily perform certain movements of the face which all tend to prevent the introduction of air and consequently of the stench into our nostrils. This expression is in every way similar to that which translates our feelings of disdain and contempt for a vile thing or for an infamous man. When the feeling of our dignity is offended by a dishonourable proposition, when, for any cause, we experience a feeling of moral repulsion, we always close the nostrils, we always raise the upper lip in such a way as sometimes to produce a sardonic smile.

The expression of olfactory pains has then many analogies with that of contempt and offended dignity.

The study of the dumb pains of self-esteem has given me the opportunity of first finding the laws of analogy of expression which I proceed to lay down. When we offend the self-love of a man, and the latter, by reason of his social situation, or by weakness of character, cannot retaliate, still if he desires to show us that our injuries do not touch him, immediately and involuntarily the muscles of his face will grow motionless almost to the point of preventing any play of expression at all, and reaching a sort of static contraction. The movement is quick as lightning; it may escape a superficial observer; but it is very characteristic and almost identical in all men. This static contraction and this forced immobility of the face entails an accumulation of saliva in the mouth; and at the end of some minutes the offended individual is forced to swallow it.¹

We may then thus formulate a fourth law: the expression of gustatory pain, and especially that produced by a bitter taste, is similar to that of the dumb anguish of self-esteem.

The expression of personal feelings is concentric and centripetal; that of benevolent affections is excentric and centrifugal. We shall see this better later when studying the

¹ Darwin, *The Expression of the Emotions in Man and Animals.*

expression of passion ; but for the present it is necessary to affirm the principle which also applies to the expression of pains emanating from the same source.

A very characteristic expression is that of fear, which is for us nothing but the *pain of the love of life*. Just as the centrifugal energies liberated by this sentiment are gigantic, so the pains derived from them take one of the most eloquent forms of expression.

The physiognomy of fear, as of every egotistical affective energy, is very concentric. The skin becomes white and cold, and, later, damp with sweat ; the heart beats violently and irregularly, then becomes slow ; respiration is laboured, the hair stands erect as under the influence of cold. If fear increases until it becomes terror, the sides of the nostrils dilate ; the eyes open disproportionately, and contemplate the object which causes us so much fear ; they may even be unconsciously turned and move convulsively from side to side. The muscles of the face are convulsed ; the whole body may oscillate like a pendulum and present spasmodic movements of different nature ; finally, muscular paralysis gives to the body the aspect of a corpse or of imminent syncope ; and the bowels, relaxing, allow all they contain to escape.

The expression of the pains of the intellect is the most difficult to study, perhaps because of their little expansiveness, perhaps because they are always complicated with that of other sufferings, notably with those of self-esteem.

The painful expression of thought beyond the closing or the spasmodic contraction of the eye, which we have already noted, is always confined to the head, which is the principal and natural seat of this sort of suffering. The head oscillates from side to side, the brow wrinkles, we strike our heads with our hands. Sometimes with a single finger one hammers at a certain point of the forehead with repeated blows, just as one shakes a pendulum when it has stopped to try to put it into motion again. At other times the

head is scratched, or, covering the face with widely opened palms, we plunge into a long and painful meditation. And in many cases we have in addition the sardonic laughter which is so frequently an accompaniment of noble and elevated pains.

When a painful expression is often repeated on the same face for days, months, years, the muscles acquire a permanent fold, and the skin which follows all their movements is furrowed by wrinkles which will never be effaced. If to these facts which concern the functions of the voluntary and involuntary muscles we add other facts relative to nutrition or to the vascular system, such as pallor, a leaden hue, wasting, the redness of the eyes, and others of like sort, we shall have certain well-known pictures which we may indicate by the terms, a sad face, a melancholy, a painful, an anguished face, etc.

There are as many permanent expressions of pains to be counted as there are physical and moral sufferings for man; but they may all be reduced to the following types, which are the most frequent and the most characteristic:—

Permanent expression of nutritive pain.

”	”	genital ”
”	”	physical ”
”	”	the pain of self-esteem.
”	”	affective pain.
”	”	weariness.
”	”	melancholy.
”	”	mania.
”	”	hypochondria.

The human face may express several emotions at the same time or at short intervals, so that the last traces of one expression may be confused with the first of another expression which is beginning. These scenes are the most difficult for the physiologist to study, the most arduous for the artist to represent.

By artificially decomposing these binary and ternary

combinations of expression they may be reduced to the following :—

Painful expression accompanied by love.
" " " *hatred.*

In nearly all the pains of affection love manifests itself simultaneously with the intensity of the suffering. When we have the person loved before us, or his corpse, or his portrait, or even when we only see it in imagination, the expression of love may alternate with that of pain, be confounded with it, or even dominate. Well for us that artists have known how to avail themselves of this precious resource of the beautiful and have thereby created, and moved us by, incomparable works of art.¹

¹ For a complete monograph see my *Physiology of Pain*, p. 227, *et seq.*

CHAPTER XI.

EXPRESSION OF LOVE AND OF BENEVOLENCE.

Just as pleasure and pain are the two poles of the world of sensibility, so love and hatred are the two poles of the world of passion. Thus we must direct our investigations to these points of departure if we wish to make a scientific study of expression.

As soon as an energy of affection has arisen within us, it tends to draw us to the loved object, whether this be a graceful animal or a beautiful woman, whether it be the fruit of our bodies or the elect of our hearts. This tendency dominates the whole life of the affections and all its expressions. It manifests itself with the first movement which makes us turn our heads towards the beloved object, and may culminate in the ardent embraces which sanctify the union of two existences, and create from them a new one. From the point of departure to that of attainment the way is long, even though it may be traversed in the twinkling of an eye on the wings of passion; but in every case the expression of benevolence is modelled on this fundamental principle—*to draw near to that which we love.*

At the moment of this drawing near we always manifest a feeling of pleasure which has many different significations, but all may be reduced to this principal point—an exhibition of joy at being united to that which one loves, and the desire to be loved in return. There, if I am not deceived, is the elementary analysis of the simplest expressions of affection, as of the most complex—*drawing near, and pleasure full of desire.* These are the positive characters of

amorous expression ; the negative characters consist in the complete absence of all expression of hatred, rage, threatening. It is a language which may be mute, which may be accompanied by some slight movements, but which every man understands at the first sight. Go and question any beautiful woman who has been for some minutes in a room surrounded by men who are watching her. She can at once whisper to you which is the one who loves her, and he who remains indifferent, he who desires her out of caprice, and he who has suddenly fallen desperately in love. And if there are many desires and many loves, she will determine the degree and nature of each.

The secondary elements of expression which are grouped round these two principles are very numerous ; the table of them will be found further on. It is right, however, to pause over several, either because they have been little studied, or because they allow us to penetrate more deeply into the mechanism of the expression of affection. Affection is an essentially centrifugal force ; it tends to pour, so to say, a part of ourselves into the person loved. Our *ego* issues almost entirely from itself to enter into another, and assimilate itself to another human nature. Thence is born an imitative sympathy, which compels us to follow with an irresistible expression the emotions which are depicted on the face of him who has awakened love in us.

This imitative sympathy is common to all sociable animals. It has been touched in passing, but with the hand of a master, by Lavater in his chapter, *On the reciprocal influence of faces on each other*. See with what delicate subtlety he speaks upon it—

“It happens to all to acquire the habits, the gestures, the face of those that they see familiarly. We assimilate ourselves in some degree to all that we love ; and of two things one : either it is the loved object which models us to himself, or it is we who seek to model him to us. All that is without us acts upon us, and suffers some

reciprocal action from our side; but nothing reacts upon our individuality so efficaciously as that which pleases us, and nothing indubitably is more lovable or more fitted to move us than the face of man. That which makes it lovable to us is precisely its harmony with our own. Would it be able to influence and attract us if points of attraction did not exist which determine the conformity, or at least the homogeneity of its forms or its features with our own? I shall not essay to penetrate the profoundness of this incomprehensible mystery. I do not pretend to resolve the difficulty of the *how*; but the fact is certain, there are faces which attract as there are others which repel; the conformity of features between two individuals who sympathise together, who are often together, corresponds with the development of their particular sensations. Our visage keeps, if we may thus express it, the reflection of the loved object."

Further on this ardent friend of men gives portraits of husband and wife to illustrate his theory of sympathy. The husband became hypochondriacally changed in face, and presented all the characters of profound desolation, and of a persistent disgust to all food. The wife, who adored him, and who followed from minute to minute the sad transformation of this cherished face, became little by little hypochondriacal herself, and her face assumed an expression similar to that of her husband. They both recovered, and reacquired their habitual expressions.

Lavater too was right when he religiously ended his chapter by very aptly quoting two beautiful passages from the Bible—

"But we all, with open face beholding as in a glass the glory of the Lord, are changed into the same image from glory to glory" (2 Cor. iii. 18). "We shall be like him; for we shall see him as he is" (1 John iii. 2).

Not only does the face of a living man awaken in us a great imitative sympathy, but it is the same thing with

a portrait when it is speaking and animated. Frederick the Great had always a bust of Julius Cæsar on his bureau. I have seen this bust, and it made a deep impression on me, to such an extent does genius still, after so many centuries, shine forth from this mute marble. The King of Prussia said that Cæsar inspired him to great things. Nor to be subject to such influences must one necessarily be a great man; it is enough to be man. From my youth up I have always had a beautiful engraving of Raphael Mengs's portrait of himself hung before my eyes, precisely because this noble and inspired face always raised me into the region of the ideal, and excited me to intellectual work.

Imitative sympathy, which is one of the simplest phenomena of the reflex life of the senses, speaks with a lively eloquence in the expression of love; but it is complicated with elements of a superior order.

The simple elementary fact is manifested when by pretending to cry we make a child who is fond of us cry too, without knowing why and how we suffer.

A more complex act is that of kneeling to kiss the feet of a beloved person, as though one would reduce one's ego to a minimum, and render it dependent on a part of the beloved. I believe that this desire to merge oneself into another, to abase oneself, to aggrandise the beloved, passes beyond the narrow horizon of expression to embrace a larger field and the wider horizon of thought. We see it in the use of diminutives which lovers and sometimes friends use towards each other, and which mothers use to their children; we lessen ourselves thus in a delicate and generous manner in order that we may be embraced and absorbed in the circle of the creature we love. Nothing is more easily possessed than a small object, and before the one we love we would change ourselves into a bird, a canary—into any minute thing that we might be held utterly in the hands, that we might feel

ourselves pressed on all sides by the warm and loving fingers. There is also another secret reason for the use of diminutives. Little creatures are loved tenderly, and tenderness is the supreme sign of every great force which is dissolved and consumes itself. After the wild, passionate, impetuous embrace there is always the tender note, and then diminutives, whether they belong to expression or to language, always play a great part.

After having examined the most striking general characters of the expression of affection, let us decompose them analytically.

SYNOPTICAL TABLE OF THE EXPRESSION OF BENEVOLENCE.

	Movements of the eyes.				
Elementary approximating movements.	„ „ lips. „ „ head. „ „ body. „ „ arms.				
Contacts.	Caressing with the hand. Kissing. Caressing with the nose. Caressing with the tongue. Clasping of hands. Different embraces.				
Different sympathetic phenomena.	Smiling. Laughter. Tears. Side to side movements of the neck. Different movements of sub-mission. <table border="0" style="margin-left: 20px;"> <tr> <td>Kneeling.</td> <td>Throwing oneself on the ground.</td> </tr> <tr> <td></td> <td>Throwing oneself at the feet of the beloved,</td> </tr> </table> Monotonous repetition of sounds and syllables without meaning. Songs and musical notes.	Kneeling.	Throwing oneself on the ground.		Throwing oneself at the feet of the beloved,
Kneeling.	Throwing oneself on the ground.				
	Throwing oneself at the feet of the beloved,				

Many of these elements of expression are also observed in animals. Darwin has described the loving cajoleries

of cats and dogs for their masters, and every one may have made the same observations from nature. In my *Physiology of Love* I have described some scenes from animal life where the two essential elements of the expression of affection, drawing near to and pleasure, are predominant. As long as I live I shall never see anything equal to the amorous enticements of two snails, who, having in turn launched their little stone darts (as in prehistoric times), caress and embrace each other with a grace and voluptuousness that might arouse the envy of the most refined epicurean.

The expression of affection begins with the tendency to approximation ; it ends in the contact of bodies, or of some parts of the body.

It is in the instinctive choice of the parts to be put in contact that are revealed the different forms of affection, from the holiest veneration to the most sensual desire. Every nation of the earth has sought the contact of the most mobile and sensitive parts. It is because of this that the great centres of the expression of love are the hand and the mouth. The unanimity is, however, most complete for the hand, as it appears that there are people who never kiss. I mention on the authority of Darwin, and of some others, the Fuegians, the Maoris, the Tahitians, the Papuans, the Australians, the Somalis of Africa, as well as the Esquimaux and Japanese of former times.

I shall always remember a long discussion which I had with a noble and intelligent painter of Java, Raden-Saleh. He told me that, like all Malays, he considered there was more tenderness in the contact of the noses than of the lips. It is by the nose that we breathe, he added ; it is there that we feel the breath of the loved one, and it seems to us that we put our soul into contact with his. I pleaded for the lips, but we might have discussed all day without coming to an understanding ; our mode of feeling was different. He thought our women very beautiful, but

he could not habituate himself to our aquiline noses, *so long, so enormous*, said he.

In the widest sense of the word, a caress may be made with any part of the body. But the foot is that which is least frequently employed, and only when one cannot employ another, or perhaps among some inferior nations when, by placing on his head or his face the foot of another, a man desires to affirm the devotion and respect which he feels towards the former.

The true organ of caress is the hand. The fingers are articulated and flexible levers which allow us to touch, to tickle, to press, to embrace, to possess, by multiplying sweet contacts and delicious sensations. It is not without reason that *caro* (dear) and *caress* have the same etymology. The hand which caresses seeks the hand or, in the tenderer movements, the face of the loved one. Often one hand is not enough for us : even two scarcely suffice. Look at the affectionate expression of a mother who passes a loving hand over the face of her child, and say if one could find a sweeter or more natural picture of affection.

In a caress one gives and receives at the same time. The hand which distributes love, as by a magnetic effusion, receives it in turn from the skin of the loved one. It is on this account that one of the most habitual and most voluptuous expressions of love consists in passing the hand through the hair. The hand finds, in this labyrinth of supple and living threads, an infinite multiplication of these amorous contacts. It seems that each hair is an electrical thread placing us in intimate connection with the senses, with the heart, and even with the thought of the one we love. It is not for nothing that the long tresses of women have been for all time a pledge of love, and that the bald bewail the loss of a whole province of the empire of pleasure.

The clasping of hands is a sort of caress ; but it is of all the least sensual. It simply expresses that two men

recognise each other, and that they have no wish to harm, and no reason to hate each other. It is one of the most habitual modes of salute in the human family ; and even savage nations, who do not practise it, always interpret it as a mark of benevolence. Among civilised peoples, it is the most natural expression of friendship, and the national character often bestows a characteristic imprint upon it. Every one knows the violent and energetic *hand-shake* of the Englishman. The Italians clasp the hand with a passionate effusion which is absolutely unknown among the peoples of the North. Many people, who are very cold and not expansive, never respond to your hand-shake ; they leave between your fingers a corpse-like member which awakens fear and horror.

The shake of the hand, though it may be one of the simplest acts of expression, expresses so many things that it would need a volume to indicate all. In clasping the hand of a friend, or of a lover, one may wish to say—*I distrust you, I no longer love you, I desire you, I adore you, I await you.*

A shake of the hand given by a man to a woman may also be impertinent—more impertinent than a box on the ear.

Next in the series of affectionate contacts, after the caress and the clasping of hands, is the embrace, which is the intertwining of the upper limbs ; it is almost the reciprocal abandonment of two existences which throw themselves on one another as though they would merge themselves into one. Its form varies, even among civilised nations ; now both arms strain the whole body of the other and reciprocally ; now one arm only passes over the shoulder and just touches the back in different ways. Sometimes the embrace takes place twice ; first we enfold one part and then the other part of the body of our beloved. In my travels in Lapland¹ I described the manner in which the Lapps

¹ Mantegazza, *Viaggio in Lapponia coll' amico Sommier*. Florence.

embrace, and in my *Dio Ignoto*¹ the strange manner customary among the aborigines of the Pampas.

Beyond the embrace, or, to say better, in another sphere of amorous sensibility, we find the kiss, unknown to many people, customary among all civilised nations, but in a different measure and with very diverse value. For example, the French kiss continually, even among persons of different sexes ; among the Italians, on the contrary, and especially among the Easterns, a man may only kiss the woman he possesses, or a daughter or a sister.

The kiss has many pages in the history of the human family ; it has often been washed out in blood, and it has raised wars between tribes or between peoples. This is natural ; the source of immense voluptuousness, it has been able to excite an immense envy ; it may reveal treason or promise felicity.

The lips belong to the skin and also to the viscera. On this rosy frontier the inner and the outer nature of the man meet and exchange their emanations, while thousands of very sensitive nerves give and receive the impressions derived from the senses, from the heart, or the brain. The poets were indeed right when they said that there two souls meet ; lovers, for all time, have rightly cried in the anguish of ardent desire—*A kiss or death!* Cases are not rare in which the kiss may be followed by swooning, and any individual of excessively amorous and sensitive temperament may be precipitated by the kiss into the last catastrophe of erotic being.

The kiss caresses at once both the skin and the viscera ; but there is an extreme difference between a kiss given and received, and a kiss only given or only received. This many ladies know, and, greater casuists than theologian or lawyer, confess without blushing that they have received many kisses, while adding that they have never given any.

It would perhaps be a profanation to analyse this

¹ Mantegazza, *Il Dio Ignoto.* Milan.

phenomenon of expression, but, scientifically considered, it is, however, true that a kiss not returned is a note of exchange not accepted. The kiss given is a soliloquy, a desire, an aspiration ; the kiss returned is a note of exchange accepted, written often with tears or with blood, but which has the brutal force of an accomplished fact. The kiss given is one of the thousand seeds which fertile nature disperses to the four winds, and which is dried up or rots away without a friendly soil receiving it. The kiss returned, on the contrary, is always fertile ; it is always a solemn fact which leaves in us some fragments of the flesh, of the heart, and the thought of another. The kiss given and received is a marriage. Fear, religion, interest, space, time may separate a man and a woman who have exchanged a kiss ; but they have possessed, and they belong to, each other.

The kiss given may be so little sensual as to be related to an expression which is not at all that of love. Men kiss the feet of idols, and holy relics, the garments of heroes, and the icy marbles of temples. In all these kisses there are but two lips, those which give.

Even between the living, the kiss may be a mark of respect, of veneration, and not of love. Thus, we kiss the hand out of politeness, of gratitude, of humility. Thus again one kisses the brow of one's son, one's daughter, or the great man whom one admires.

Still more singular are those cold conventional kisses in which, though there may be four lips in play, the four lips do not meet. Each nose just kisses the cheek ; but, with a beautiful *chassez-croisez*, the noses change place and just touch the cheek of the other. These are still kisses ; they belong scientifically to the expression of benevolence ; but what a gulf between them and the kiss given by Paolo to Francesca !

When the mouths abandon themselves each to the other, when the lips which touch are no longer either two or

four, but one only ; when all frontier has disappeared between mine and thine ; when skin and viscera, soul and body touch, intermingle and merge one into the other, then it is a true kiss, a perfect kiss, perhaps the most beautiful expression of love, which draws the man and the woman together to re-illumine the torch of life.

Behind the lips there is another very sensitive organ, the tongue, which often takes part in the expression of love. This often happens with animals, who, for example, lick their young.

I even know a very affectionate child, who, without having learnt it from any one, licks the people to whom he wishes to show friendship.

The different elements of expression which we have studied are combined in different ways to form complex pictures, of which these are the most striking—

Expression of Sexual Love.

Expression of Maternal Love. In this we find every warm tint of the erotic world save voluptuousness. As it is one of the most animal and the most automatic affections, it is always characterised by impetuosity, an extreme energy almost convulsive and volcanic. Many great artists have known how to make themselves immortal by rendering the expression of maternal love, which is at once so sensual and so elevated, so impetuous and so constant.

The Expression of Compassion. This is a binary compound of the expression of pain and of love. The picture of it is so frequent, so familiar, that the most mediocre painters have always known how to represent him who, seeing another suffer, suffers with him (*cum eo patitur*).

Generic Expression of Benevolence. This is an affectionate, serene, and tranquil expression, without the warm tints of desire and voluptuousness, and without the sad colouring of compassion.

It may rise by degrees to the expression of friendship, which is an elevated and well-defined form of benevolence

between men. In both of these expressions you will find the smile, the expansion of the features, and a certain energy of movement which demonstrates our disposition to aid our like, to raise them, and sometimes to laugh and weep at once.

This expression of benevolence for men may become permanent on a face, and thus give it a generic character which is commonly called the face of *an honest man*, of *a good fellow*. We shall speak of it again in relation to the criteria by which we may appreciate the moral value of a face; but meanwhile I may be permitted to show how much uncertainty on this subject prevails in the old works on physiognomy, and even in the most recent.

See, for example, what the celebrated Dalla Porta says about it—

"On the Face of the Good Man."—Since good manners always accompany justice and the hatred of vices, we shall collect the scattered features of the upright man and the moral man, and with them compose a face the characteristic signs of which will be, for the most part, those of the average.

"The Good Man."—To be recognised by the average character of all his features. The large nose, well proportioned to the face; if long, descending to the mouth; if short, wide and open. The face beautiful, the breathing regular, the chest wide and the shoulders ample; the breasts mediocre; the eyes deeply set, large, mobile, like water in a glass, with a constant gaze; the circles of the eyes mediocre, the eyes always open, dark, and moist. The aspect amiable or melancholy; the lashes united, the brow austere and humble.

"The Moral Man."—The brow keeps the medium between calm and agitation. The ears suitably large and square, the face mediocre, the voice intermediate between the animated and the feeble or delicate voice, the laugh seldom, nails wide, white or rosy; eyes blue and concave, large,

immobile, and gleaming, moist as water ; feet well formed, nervous, and delicately jointed.”¹

I pity those who would make use of these portraits to recognise the good or the moral man.

The small-nosed may not be a good man, and he of the brown eyes must resign the claim to good morals ! What cabbala, what confusion, what conjectures, and what poor science ! Submit all the assertions of the Neapolitan physiognomist to a severe analysis ; we only find two truths among them. The first, that the face of a good man does not present any positive signs of perversity, and the second that his eyes “gaze with constancy”—that is to say, express sincerity and frankness.

Let us jump over two centuries at least, and see how Lepelletier paints “the conscientious, indulgent, incorruptible man of perfect abnegation”—

“A regular head, clearly drawn in its contours, a marked predominance of the cranium over the face, the features of which are generally fine, delicate, and well harmonised ; a losty, noble, worthy forehead on which the candour, the beauty of the soul gleams with an unspeakable expression, where the purest and most delicious radiance of feeling and of thought seems to expand without effort.

“The neck not too ample, rounded, slow, simple, and graceful in its movements, well set off from the shoulders, generally effaced, not prominent or mobile ; a delicate, elegant bust, natural in its poses, flexible without undulations, without pretension and without artifice in its movements ; the limbs participate in his happy physiological disposition, and only execute useful, precise, and reserved movements . . .”

What fine words, and how little observation ! What uncertainty and what vicious circles ! Lepelletier, after two centuries, was not able to correct a single feature in the grotesque picture which Dalla Porta had traced.

¹ Giov. Battista Dalla Porta, *op. cit.*

Lavater, in whom, however, the scientific tendency is wanting, often guesses with subtlety of feeling that which experience could not suggest to him. Listen to him—

“*Signs of Probity.*—There are no forms of face which are not susceptible of a certain amount of probity ; but all do not lend themselves to it indiscriminately. The ugliest and the most discredited faces are sometimes the most honest ; the most beautiful and the best proportioned are often deceitful. Nevertheless, I would trust a regular face more willingly than distorted features. When the eyebrows, the eyes, the nose and the lips are in harmony, the expression of probity only acquires the greater certitude.

“We risk nothing by calling a face honest which unites in the same degree energy and goodness. Kindliness, when it is alone, undertakes things which are above its powers ; it promises that which it cannot perform, it commences that which it cannot accomplish. Energy, when it is not softened by kindliness, is difficult to move : it does not do what it might : it becomes oppressive and unjust. Kindliness without energy is a cloud without water ; energy without kindliness resistance without lever. If a man only possesses one of those qualities he cannot be perfectly good. Energy quite alone is hardness, and excessive kindliness degenerates into simplicity. The one sins by the fault of gentleness, the other by excess of rigour ; it is in the just medium that we find active force, equity, probity.

“Thus mildness and severity, so long as they are isolated, are not associated with probity. This latter demands at the same time facility and strength, strength which shall not be oppressive and a facility that cannot be played with, the consciousness of what we are and of what we are not, of that which we have and of that which we need, of that which we can do and of that which is above our power. Such are the fundamental features of honesty. Astuteness is a want of energy which we seek to dissimulate with an

effort. Every effort which does not respond to an internal force or an immediate external cause is a feint. Whatever is feigned is not natural, and that which is unnatural is contrary to honesty."

And further on—

"I especially recognise the honest man, as also the truly wise man, by the way in which he knows how to listen. It is at that moment that energy and good will and their reciprocal proportions show themselves most clearly.

"I also count among the physiognomical features of probity a certain clearness of the eyes, a luminous look which seems to combine calmness and mobility, and which holds the mean between the bright and dull look—a mouth without grimaces and contortions—harmony between the movements of the lips and those of the eyes—a complexion which is neither too leaden nor too sanguine, nor too pale.

"The signs that I have just enumerated may be absent in many honest faces; but it is very difficult to find them combined in the face of a scamp.

"A man who, laughing heartily, does not give vent to the least sign of irony, who, after the first explosion of gaiety, continues to smile peacefully, and whose face afterwards takes on an expression of satisfaction and of serenity, very certainly deserves our confidence, and his honesty cannot be put in doubt. Generally the different expressions of laughter and of smiling may be considered as characteristic indications of honesty and dishonesty."

And see how little Lavater, who was a priest and a holy man, esteemed his fellows. He finished his chapter with these words—"The physiognomical features of courage accompany those of honesty. Every fraud is an act of cowardice. According to this belief, I believe that there is no condition where honesty is more known than among soldiers. It is just as rare in another profession . . . which I will not name."

I wished to reproduce a whole page from the work of Lavater, because there we find combined the faults and the merits of this immortal author. When one has just read Dalla Porta and Lepelletier one feels transported into a more breathable atmosphere, one admires the subtleties of his psychological observations, the perfectly feminine sensitiveness which knows how to distinguish the most delicate traits of human nature. But what uncertainty in the lines, how many divinations substituted for observation, what perpetual confusion between the facts and their interpretation !

To-day we have rightly become more exacting of scientific methods ; thus in the study of the interpretation of the face and of expression we have more often to destroy than to construct. We must limit ourselves to saying that in men disposed to good the most frequent expression is that of benevolence, and that, in consequence, the expressions which we have sought to analyse and study in this chapter are found permanently on their faces. If, however, a definition, an aphorism, is exacted of me, here is mine in all its voluntary indigence.

The face of the upright man is, above all, frank, because it has nothing to conceal; it is serene and smiling, because the exercise of gentle affections is one of the surest and most durable joys of our life.

CHAPTER XII.

EXPRESSION OF DEVOTION, OF VENERATION, AND OF RELIGIOUS FEELING.

IN a wide sense, devotion, veneration, and all the affective and intellectual energies, which we comprise synthetically under the name of religion, belong to the order of benevolent feelings ; thus the expression corresponding to them tends to take the form of the expression of benevolence. We certainly cannot express esteem, veneration, or religious fervour by clenching the fist, gnashing our teeth, or showing passion under any form.

The expressions which we are studying are always composed of different elements. Veneration consists of loving and admiring at the same time ; now admiration is an intellectual fact which has its special expression. In devotion, in esteem, in respect, a third element intervenes —our instinctive tendency to lessen ourselves before a being whom we feel, or whom we believe to be, greater or loftier than ourselves. All this is found in the religious sentiment, and to it is added fear, hope, or repentance. We will go on to study in order its different comparative expressions.

Esteem, Devotion, Veneration.—In the simplest expressions of esteem one sees the smile of affection, but contained and tempered by a loftier feeling. The eye is fixed and widely open, but at the same time inclined to look downwards, the first symptom which indicates the existence of devotion, the abasement of oneself. Darwin has only given a few lines to the expression of admiration, but they are traced with a master's hand—

“Admiration apparently consists of surprise associated

with some pleasure or a sense of approval. When vividly felt, eyes are opened and the eyebrows raised ; the eyes become bright instead of remaining blank, as under simple astonishment ; and the mouth, instead of gaping open, expands into a smile."

Lebrun has devoted three plates to these emotions in his physiognomical atlas.¹ He says of *admiration*—

" This passion causing but little agitation, alters as little the parts of the face. Still, however, the brows are raised, the eye opens rather more than ordinarily, the pupil stationed exactly half-way between the lids seems fixed upon the object, the mouth is partly opened, and forms no marked change in the cheeks."

Lebrun's Plate 4 represents *admiration with stupor*; but it is not happily drawn, for it rather recalls luxury. The commentary accompanying the face is of more value.

" The movements which accompany this passion scarcely differ from those of simple admiration, except that they are more vivid and marked, the eyebrows more elevated, the eyes more open, the pupil further from the lower eyelid and more fixed, the mouth more open, and all parts in much more obvious tension."

Plate 5 gives us *veneration*; but here again the artist is inferior to the man of science. The eyes are too much closed, the head too much inclined ; this face might as well represent humility or moral dejection, or still other emotions. The commentary is good.

" From admiration is born esteem, and this produces veneration, which, when it has something divine and hidden from the senses as its object, causes us to bow our heads and to lower our brows ; the eyes are almost closed and fixed, the mouth shut. These movements are gentle, and produce few changes in the other parts."

Plate 6 of Lebrun represents *rapture*, an almost absolutely intellectual phenomenon, which may be produced

¹ Charles Lebrun, *Expression des passions de l'âme*.

by different causes. Still, as we associate it indirectly with the expression of religion, it will not be out of place to recall here what Lebrun has said on the subject—

“Although rapture has the same object as veneration, considered differently, its movements are not the same; the head is inclined to the left side; the eyebrows and the pupil are directly raised; the mouth is partially opened, and the two sides are also slightly raised. The rest of the parts remain in their natural position.”

The basis of devotion and of veneration is always a feeling of affection. The proof of this is seen in several acts which accompany its elementary expression, described below, in the tendency to kiss the hands, the feet, or the garments of the person who inspires the respect, or to put out the hands, the palms directed towards the axis of our body, as if they were preparing for a caress. This act, which Darwin passes over in silence, may be explained in another way—by the general tendency of the expression of admiration. This last is always expansive; just as the eyes and the mouth enlarge, so the arms lengthen themselves from the trunk; the palms of the hands are directed towards the horizon, or are turned towards the axis of our body. Unless I am deceived, these two positions of the hands characterise two different periods of admiration.

When the palms are turned towards the axis of the body, the fingers are more often pressed against each other, and the gesture partakes of the nature of a potential caress; and, indeed, there is much affection in the feeling we then experience. When, on the contrary, the palms are turned towards the horizon, the fingers are very often much apart, as in fright. And because astonishment in this case predominates over affection, the expression is rather intellectual than affective.

If admiration passes into rapture, the hands are crossed, and rest on the thighs if we are seated, on the stomach if we are standing, as though we would take a convenient position

EXPRESSION OF DEVOTION, ETC.

to remain a long time in contemplation, and taste all the voluptuousness of admiration. At the same time the head is slightly inclined, sometimes on the right shoulder, sometimes on the left (and not always on the latter, as Lebrun claims).

Another expression consists in joining the hands, as in the act of prayer, either on the face, or before us, or finally extending them towards the horizon. Hensleigh Wedgwood¹ would explain this act by atavism, by the unconscious recollection of the time when the hands of the vanquished were presented to the chains of the victor. Darwin² seems disposed to accept this theory. I shall allow myself to express a doubt, for the hands are joined to supplicate God and the powerful beings before whom we humiliate ourselves, as well as in veneration and admiration. I admit that, accustomed from our childhood to join our hands in praying to God, we employ the same gesture to supplicate men who may do us much good or much evil, and whom we thus put in the place of God. I believe, however, that this expression of the hands has in this case a more organic and a less historical origin. They serve now to extend the circle of expression, now to simulate the desire or the attempt to possess and to caress that which we venerate, and that which we admire.

According to my observations, I should advise artists to reflect on the following interpretations of the expression of the hands which accompanies the admiring expression of the face.

The hands open, with the palms turned towards the axis of the body.

Loving admiration, veneration full of tenderness. It is observed in its most characteristic form in one looking at the portrait of the cherished dead, or at a sacred image.

The hands much open, with the fingers apart and the palms turned towards the horizon.

¹ *The Origin of Language.*

² *Darwin, op. cit., p. 221.*

Admiration full of stupor. It is manifested in the presence of an unexpected and grandiose scene of nature.

The hands interlaced and resting on the thighs or the abdomen.

The long patient and gentle contemplation of a beautiful picture, a beautiful statue, a loved being asleep, or an adored corpse.

The hands joined as in prayer.

Admiration of the divine or perhaps of an act of heroism, or again of a masterpiece of art.

The trunk and the lower limbs also take part in the expression of devotion and of admiration, but always in the same way, by drawing nearer to the earth and abasing themselves. There is always a tendency to place oneself beneath another, and to crouch down so as to occupy the least possible space. For this reason we bend the body forwards, kneel down, and prostrate ourselves, our faces against the earth.

Among some nations unheard-of and degrading forms of this expression are found, such as crawling along on the belly, licking the earth, placing the head under the foot of him whom they would honour.

I should exceed the limits I have imposed upon myself, if I should write a history of the marks of respect and the signs in use at different epochs, and among different peoples, indicating the social rank of the person so distinguished. Here the natural expression gives place to convention, and we enter in the domain of conventional language, which has quite a different origin from that of expression. Among nearly all civilised peoples it is a sign of respect to take off the hat; in other countries this would be a want of respect. And even among ourselves it is the men only who uncover, and not the women. It is perhaps (as Tylor thinks) because in the middle ages men had to disarm or remove their helmets before entering a church or a friend's house. The salutation varies not only with sex,

epoch, and race, but also with profession, for, among us, the soldier may not remove his head-covering to salute, but must only put his hand to his head.

In the little that we have said up to this point, all the elements will be found necessary to distinguish religious expression, which is not a world apart, but a territory where the most varied energies are confounded, the highest aspirations and the lowest fears, to form an empirical medley which it will always be very difficult to define scientifically.

In religious expression we find veneration, stupor, ardent affection, terror, hope, all with which men, or the inanimate objects which represent them, can inspire us. The only feature which is peculiar to it consists in raising the eyes to heaven, doubtless because it is there that men imagine they see God and the saints. In religious ecstasy the eyes may be so turned upward that the cornea disappears, as happens in sleep.

As art has been for centuries almost solely religious, we have thousands of reproductions of simple devotion and of the martyr, of humble prayer and of hysterical ecstasy; but, even in the immortal works of the great painters and the great authors, we should not find an expression which differs in any way from the expression of veneration, of fear, of hope, of pleasure, or of pain. With a little imagination and with a pen it is possible to manufacture as many supernatural worlds as one desires; but it is impossible to manufacture one single little muscle to express a feeling which is only the sum of many energies, all human and all susceptible of being anatomically and physiologically analysed.

Lavater would suffice to prove it. Religious as he was, he has devoted one of the longest chapters of his work to the study of *religion and of religious faces*,¹ still, with all his ingenuity, he has only succeeded in giving a description

¹ *Op. cit.*, tom. iv. p. 167.

of the character of religious men, and not a picture of religious expression.

After having said that there is “a religious conformation,” he feels the need of justifying these strange words, and supposes that it will be said of him: “The good Lavater does not know what he is talking about, and by reason of much writing has lost his head.”

Further, he distinguishes three principal classes of religious conformations—

1. The drawn and hard type (for example, that of Calvin).
2. The vague and gentle type (in the manner of Zinzendorf).
3. The free and straightforward type, which is susceptible of an excess of rigour or of extreme gentleness (St. Paul and St. John).

In a very happy manner he sketches the physiognomy of the Jesuits, and gives some good portraits of Loyola, Ximenes, Charles Borromeo, and several others. Nothing can be more wonderful than the religious expression of an old man praying. All artists who have to treat religious subjects should gather inspiration from this little engraving, which is quite a poem.

I give here the commentary which accompanies this marvel.

“Concentration of a pious heart, absorbed in the meditation of death, whose every thought turns to God, and who, disenchanted of all in this world, only sighs for eternal repose. Maybe his devotion is timid and little enlightened; but at least it is sincere. Every feature of the face speaks of it, from the contrite and fearful eyes to the wrinkles of the brow. It is not a sinner who repents; it is a saint who, at the least distraction, fears to lose the path of safety. The ardour which once inflamed his youth to-day still warms his piety, which is not defiled by the ostentation of the Pharisee.”

In his study on the religious face Lavater has painted

himself perfectly in a few lines where the naturalist is seen through the mantle of the theologian and religious man.

"Every religious man involuntarily models the divinity after his own character. The phlegmatic adore a calm and gentle god; the violent fear his power and his vengeance. That is why St. Peter and St. John spoke of the same God—the one with terror, the other with tenderness."

If the genius of Lavater has not succeeded in giving us the physiognomical type of the religious man, it would be wonderful if his vulgar disciples and modern writers had had more success.

Some among them can only be judged with a smile. Thoré,¹ for example, pretends that the elevation of the top of the head is a characteristic common to all religious men.

"Works of art present many proofs in support of this assertion. Nearly all the antique statues have the upper part of the head but little elevated. Such is the pagan type, in which religiosity was less developed than in the Christian type. . . . The head of Christ, reproduced by masters, offers in its upper part an admirable conformation, whether because instinct has guided the artists, or whether because this type has been preserved by traditions."

Lepelletier attributes the following features to a man of sincere piety and faith:—²

"The head, even when it does not present a considerable development, is still well formed; the forehead predominates without exaggeration; it is pure, noble, worthy, without ostentation, without vanity; violent emotions never come to disturb its candour; and those which might alter its calm seem to be neutralised there by the heavenly ray, the light and power of which it receives; the eyebrows form two perfect and regularly

¹ C. Thoré, *Dictionnaire de la phrénologie et de la physiognomie*. Bruxelles, 1837.

² Lepelletier, *op. cit.*, p. 543.

traced arches; the almond-shaped eyes are somewhat large.

"The neck is rather long than short," etc.

Oh short-necked men! oh small and round-eyed women! renounce the hope of entering the kingdom of heaven, for you can have neither true piety nor sincere faith.

CHAPTER XIII.

EXPRESSION OF HATRED, OF CRUELTY, AND OF PASSION.

How often we have occasion in life to repeat with a profound sigh the words of Seume—*Heaven has spoilt earth for us!* Hatred is to love in the domain of the passions what pain is to pleasure in the domain of sensations; and the expression of hatred must be the opposite of that of love, just as the feelings which they have to manifest are in absolute contradiction. This study, proceeding by comparison and antithesis, would be very easy if we had formed for ourselves a conception of hatred drawn only from observation. But in thinking of hatred we are distracted from a healthy judgment by the influence of ethical and religious ideas, which have accustomed us to look on hatred as a sin. On the contrary, every animal, every man born under the sun must and can hate, provided that he has formed a right conception of hatred, of shrinking from, of reaction against that which threatens and offends us. Montaigne, who knew the human heart most profoundly, had a presentiment of this truth when he said, “Nature has, *as I fear, herself given to a man something inclining towards inhumanity.*”

As I have already devoted some volumes to pleasure, to pain, and to love, I should like, before I die, to be able also to write the *Physiology of Hatred*; only then shall I be able to feel that I have touched the four cardinal points between which human nature moves. For the present I may be permitted to sketch the expression of one of the most powerful human energies, whence more than a half of the history of humanity is derived.

The old physiognomists have scarcely concerned themselves with more than passion, and have always taken great care to distinguish it from hatred, of which, on the contrary, it is a particular form. Still, they have left us some grotesque portraits of the wicked. Let us rapidly pass through some of these bygone mists.

The ancient treatise of Polemon on Physiognomy, translated into Italian by Carlo Montecucoli, says:—

"Signs of the Wicked and Foolish.—Wicked fools are like beasts, some of which are cruel, others gentle, and it is thus that we must judge of them. Those who are gentle are still more foolish ; wild goats, sheep, horses, and other like are gentle and quiet ; on the contrary, wild beasts are more fierce and violent. In the same way we must reason on the face of men, for there are among them two races—the one gentle and just, the other of savage manners. They are distinguished from each other by asperity and harshness, or by delicacy ; by this we may see whether they are arrogant or if they are amiable ; gentleness is the natural companion of justice, harshness of haughtiness and intemperance ; the libidinous are those who much resemble the peasant ; the wicked fool has long hair, his head hard and awry, large ears, a wry neck, long feet, high heels, a harsh and rugged forehead, gloomy, small, dry eyes, his gaze fixed, narrow shoulders, a long beard, a wide, open mouth, as though crushed, an elongated face and bearing as it were scars of wounds ; he is bent, big-bellied, with thick legs, enormous and coarse wrists and ankles ; he has a barking, weak, shrill, and impudent voice.

"Signs of the Choleric Man.—He is of upright stature, massive figure, red complexion, his shoulders thrown back, and not too strong, his chest flat, his beard long and curled, his back wide, his hair falling regularly round his neck, his face long, his eyelashes curved, his nose hollowed."

Aristotle distinguishes between three sorts of rage—the

bilious or sour; the sharp or bitter; the difficult, harsh, or cruel—

"Biliosi seu acuti supra modum sunt prompti et celeres et ad omnia, omnibus de causis, iracundia excandescunt. Acerbi ad injuriam ulciscendam non adeo rapiuntur. Sed solum ejus memoriam cum intima tristitudine diu retinent, quasi diu ni iracundia perseverant; ultri namque ita sedare solet voluptatem afferens, et dolorem ex accepta injuria mitigans, permolesti sunt omnibus et sibi ipsis et amicis propter perpetuam ex ira tristitudinem conceptam. Asperi ac sævi ad vehementiorem iram quam par sit, sunt propensiores, diutius iram retinent, neque placantur, nisi injuriam ulti sint aut poenam inflixerint."¹

Nquietius describes with tolerable success the man who is overcome by an access of rage—

"Rubet in ira facies; quia ebullit sanguis circa cor et subtilissimus spiritus affatim caput petit, ac primo quidem per nervos sexti paris constringitur jecur; constringitur et cor ad appulsum mali quod iram provocat; effunditur bilis a vesicula in venam cavam (*sic!*) deinde hic sanguis bile permixtus cor petit, et circa ipsum jam propter spem vindictæ, quæ ut bona menti objicitur, dilatum, ebullit; atque ex hac constrictione et dilatatione cordis oritur ut initio qui irascuntur, palleant, tum subito ignescant; fateor vero nonnullos esse qui diutissime palleant, sive quod eorum ita maxime cum timore conjuncta sit, quod verentur quæ moliuntur aggredi, sive quod atrabili abundant quæ non adeo celeriter accenditur, et accensa non adeo facile evaporatur, huc referendum est quod palpitat cor propter nimium calorem quo circumæstuat, tremunt membra, quia insequabiliter et tumultuarie spiritus diffunduntur. . . ."²

Many centuries before Nquietius, Seneca had traced a far more beautiful picture of rage—

" . . . Ut furentium certa indicia sunt audax et minax

¹ Honorati Nquietii, *Physiognomia humana*. Lugduni, 1648.

² *Ibid.*, p. 87. Lugduni, 1648.

vultus, tristis frons, torva facies, citatus gradus, inquietæ manus, color versus, crebra et vehementius acta suspiria, ita irascentium eadem signa sunt: flagrant et nutant oculi, multus ore toto rubor, æstuante ab imis præcordiis sanguine, labia quariuntur, dentes comprimuntur, horrent et surriguntur capilli: spiritus coactus ac stridens: articulorum se ipsos torquentium sonus: gemitus, mugitusque parum explanatis viribus, sermo præruptus et complexæ sæpius manus, et pulsata humus pedibus, et totum concitum corpus, magnasque minas agens, foeda visu et horrenda facies."

There truly we have the picture of a master.

Ghiradelli strives to prove to us that a man with a small forehead, and still more, a pointed nose, is necessarily a passionate and wicked man, and he gives us the physiological reasons for this—

"A small forehead denotes a passionate man because it is a sign that his animal spirits are crowded together in the anterior part of the brain, that they are pressing one upon the other and become inflamed, which often sets the blood and brain on fire, and consequently the heart, because of the correspondence which exists between these principal organs of our life; and passion is nothing else than the blood becoming heated within the heart."

To Ghiradelli the nose is the centre of passion.

"Now, it is right to know that the nose (in addition to its peculiar office, which is to purge the brain of its excrements) has also another, which is, when the passion of rage and indignation is kindled and inflamed within the bosom, to manifest it without in such a way that the point of the nose shows us the perturbation of irascible power.

"And as oxen have very lymphatic and but slightly bilious flesh, and because they have thick noses with rather depressed nostrils, and are generally very indolent animals, it is permissible to conjecture that he who has a nose like

that of the ox will be indolent in his business and slow to get into a passion, and all this conforms to the rule of contraries. Passionate people are wont to have pointed noses, and on the least occasion of irritation we see them get red. . . .”

The strange discovery that a pointed nose indicates a disposition to anger does not however properly belong to Ghiradelli. See how many have preceded him—

“*Nasus in extremitate acutus, mendacii est nota, litis et iracundiae signum; est enim a colera.* . . .”

And elsewhere—

“*Nasus in extremo acutus irascibiles notat.*”—GRATTAROLA.

“*Nasi sumnum gracile si fuerit facilem iracundiam.*”—POMPONIO GAURICO.

“Men with very pointed noses are generally impatient, disputatious, proud, because they are of choleric complexion, and in the mixture of the principles of their temperament the igneous parts are dominant.”—INGEGNIERO.

“*A very small nose denotes a man of changing humour. . . . If the nose is thin, he who possesses it is very passionate. Moreover, if the end is pointed, he will be a cruel man.*”—G. B. DALLA PORTA.

I am very sorry to be obliged to contradict so many distinguished authors; but, without going beyond my family and the circle of my intimate acquaintances, I can absolve pointed noses from the grave accusations brought against them from Pomponio Gaurico to Niquetius. An entire family of passionate people is characterised by possessing very rounded noses; and an excellent *pater familias*, whom it is impossible to get into a passion, has so pointed an end to his nose that he might on an emergency make use of it as a stiletto.

Lavater, who was so amiable a mixture of benevolence and of mysticism, only occupied himself incidentally with the physiognomy of the wicked. And so he could write

on the beautiful frontispiece of his work that his *Essay on Physiognomy* was destined to make man known and loved. However, in the seventh fragment of his *Physiognomical Anecdotes*, he shows that it is sometimes possible to read on the human face feelings of passing or permanent hatred.

"May I die if this man isn't a rascal!" said Titus, speaking of the priest Tacitus. "I have seen him weep and sob at the tribune three times when there was nothing of such a sort as to draw tears, and turn round ten times to hide a smile when there was a question of crimes or of misfortunes."

"A stranger, named Kubisse, crossing a room with us in the house of M. Langes, was so struck by a portrait which was there with many others, that he forgot to follow us and stopped to contemplate the picture. An hour after, seeing Kubisse did not return, we went to seek him, and found him with his eyes still fixed on this picture. "What do you think of this picture?" asked M. Langes; "is it not that of a beautiful woman?" "Without doubt," replied the other; "but if it is like, the person that it represents has a very black soul—she must be a demon." It was the portrait of Brinvilliers, the celebrated female poisoner, as celebrated by her beauty as by her crimes, which led her to the stake."

Such are the mists of the past where anatomy and expression, cabalism and observation, are confounded. Let us come to the present, which exacts sure methods and positive analyses.

The expression of hatred rests entirely on this fundamental basis: *shrinking from that which we hate, from that which causes us to suffer, from that which threatens us.*

The particulars of the expression, such as a minute analysis furnishes, are found collected in the following table:—

SYNOPTICAL TABLE OF THE EXPRESSION OF HATRED.

Elementary movements of shrinking and of repugnance	Drawing back the head.
	Drawing back the whole trunk.
	Throwing the hands forward as though to defend oneself from the hated object.
	Contracting or closing the eyes.
	Elevation of the upper lip and contraction of the nose.
Potential or actual threats.	Unusual wrinkling of the eyebrows.
	Eyes widely opened.
	Showing the teeth.
	Gnashing the teeth or contraction of the jaws.
	Opening the mouth wide and putting the tongue out.
	The fists closed.
	Threatening movements of the arms.
	Beating with the feet.
	Deep inspirations—puffing expiration.
	Grunting and different cries.
Different reactions, vaso-motor and sympathetic phenomena.	Automatic repetition of the same word and of the same syllable.
	Sudden weakening and trembling of the voice.
	Spitting.
	General trembling.
	Convulsions of the lips.
	Convulsions of the limbs and of the trunk.
	Self-inflicted pains, such as biting the fists or gnawing the nails.

The signs of shrinking from, and of repulsion, serve to mark the transition from repugnance to hatred in the ordinary sense of the word; but for us they belong to a single natural group of acts of expression.

According to the degree of aversion, according to our sensitive dispositions, according to our power of controlling ourselves, we can express hatred with a certain amount of seriousness—the first expression of pain; or we may take

the expression of repugnance and disgust, and pass thence to the most manifest reactions of aggressive hatred.

Hatred, such as we understand it in the common acceptation of the word, enters but little or not at all into disgust, into aversion for an inanimate thing. In this emotion there is only a purely pained expression, although with it may be associated, in different proportions, the expression of shrinking which is the beginning of hatred.

Civilisation has so clipped our nails and blunted our teeth that sometimes a violent hatred can have no other external manifestation than a simple backward movement of the head. However imperceptible this act may be, it is always accompanied by some act of expression in relation to pain. And this pain has certainly two causes: first, the unpleasantness of finding oneself before a detested person; and secondly, the annoyance felt at being forced to repress and dissimulate one's hatred and grief.

Suddenly, in the midst of a company of amiable and well brought-up people, a man enters who is antipathetic to all, and perhaps to some an object of contempt and violent hatred. Then is the moment to study the negative, and, so to speak, the dawning expression of hatred. The head withdraws from the axis of the body; the body leans against the back of the chair or against the wall; there is a general centrifugal movement. At the same time lips contract, faces, which a moment before were gay and serene, are clouded over. Thus you have before you a complete picture of the expression of hatred, but reduced by social restraint to an expression scarcely indicated. You have a tendency to withdraw from the hateful person, which represents a whole group of the expression of repulsion. You have the expression of pain which most often accompanies the expression of hatred. Finally, you have a silent contraction of the lips, which is the first warning of resistance —of a fight that is about to begin. The first thing that

a man inevitably does when he is preparing for a fight is always to hold in his breath and close his mouth.

The wrinkling of the eyebrows is a very characteristic element of the expression of hatred, and marks the transition between two groups of expression. When this wrinkling is slight it only indicates pain. When it is very pronounced, it tends to frighten the adversary by giving to the eyes a threatening expression, as happens among several anthropoids. There are domains common to hatred and to pain: these two emotions are often intermingled and entangled to such a point that it is impossible to make an elementary analysis of the binary psychical compound which is before our eyes. We suffer and we rebel against this suffering, and we get into a passion as if pain were an enemy to conquer; at other times we hate profoundly and we suffer from this hatred. In both cases the expressions are identical: *love and pleasure—hatred and pain*; there we have two binary compounds, two such energetic psycho-expressive combinations that the formidable and destructive voltaic pile of our analytic methods is needed to separate their elements.

The eye plays a great part in the expression of hatred, and that in two different and almost opposite ways. In simple repugnance, in simple shrinking, the eye closes, entirely or partially, as though to repulse the sight of the thing or of the person which we hate. When, on the other hand, we reach the period of reaction or of menace, the eye is widely opened, the upper eyelid almost disappears, and the glance is intrepidly fixed, taking the character which we rightly call menacing, since it announces an imminent, or at least a virtual, threat. Terror and horror are translated by identical looks. This analogy is so real that Lebrun, in his atlas, could not distinguish hatred from terror, and it would be possible without any injury to the truth to transpose the numbers which he has placed below his figures 16, 17, and 18. In figure 16, entitled *Horror*, the

muscles are contracted as in hatred, and figure 17, entitled *Fear*, might also be given as representing a fit of passion. Figure 18 expresses *passion*, but it might serve just as well for *fear*. Figure 17, *Hatred or Jealousy*, is more successful. But all these figures are false or incomplete, because they want the expression of the arms and of the hands which, in great emotions, always complement the expression of the face.

Represent *hatred* on the face while you give to the hands the gesture of fear, and you will leave the picture of *horror*. Represent *horror* on the face, and add clenched fists, and you will have the picture of hatred.

The inexact and incomplete plates of Lebrun are corrected by the explanations which accompany them.

“*Rage*. The effects of rage make known its nature. The eyes become red and inflamed; the pupil wild and gleaming; the eyebrows now lowered, now equally raised; the forehead very wrinkled; folds between the eyes; the nostrils open and distended; the lips pressed together, the lower projecting beyond the upper; leaving the corners of the mouth a little open; forming a cruel and disdainful smile.

“*Hatred or jealousy*. This passion renders the forehead wrinkled, the eyebrows lowered and ruffled, the eye flashing, the pupil half hidden under the eyebrows turned aside from the subject; it should appear full of fire as well as the white of the eye and the eyelids; the nostrils pale, open, more marked than generally, drawn backwards, causing the appearance of wrinkles in the cheeks; the mouth closed in such a way that the teeth are seen to be closely pressed together; the corners of the mouth drawn backwards and very much lowered; the muscles of the jaw will appear depressed; the colour of the face partly inflamed, partly yellowish, the lips pale or livid.”

To compare the large artistic figures of Lebrun with the little phototypes which illustrate Darwin’s book, is

to see with a glance what an immense step the science of physiognomy has made in the relatively short period which separates the great painter from the great naturalist. There, all is art and convention, all is exaggeration and confusion ; here, nature, which is well questioned, answers still better. There, theory, which enslaves truth, maims or deforms her ; here, truth is quite naked, and offers herself for contemplation and admiration.

In the expression of hatred the eye is not only closed or concealed ; it also frequently becomes vividly coloured ; this is the sign of strong congestion tending to the head. In the gravest cases, the eye starts from the orbit ; this is a sign of excessive hyperæmia, and in vulgar parlance is expressed thus—*To have his eyes out of his head, to have eyes which seem ready to start out of his head*, etc. According to Gratiolet, the pupils in those cases would always be very much contracted, as happens in acute meningitis.

The nose dilates, the wings of the nose are raised, and in some individuals in whom these are very mobile this trait may be enough to give a ferocious expression to the face. That is due to the deep inspirations which tend to stop respiration spasmodically, and doubtless also to a sympathetic phenomenon of the facial muscles.

One of the great centres of the expression of hate, perhaps the most important of all, is the mouth, which sometimes remains spasmodically closed to indicate the general tension of the muscles preparing for the struggle ; more frequently it opens, shows all the teeth, or at least the front teeth, or only the canines.

Darwin has studied this part of the expression of hatred admirably, and shown the part which atavism plays there.

The teeth are arms which have fallen into desuetude among us who are civilised, but are still employed by savages and children, who unconsciously reproduce so many traits of the lives of our prehistoric ancestors. But

if we no longer bite, we still show our teeth in our fits of passion, and we gnash our teeth to make our adversary feel their strength.

In rage we sometimes only show a single canine ; our faces then take the expression known as the sardonic smile. It is not every one whose mouth and facial muscles are so conformed as to take this expression ; some people can contract but one of the elevators of the lip, so as to show the canine tooth only ; and at most they can only do so on one side. In this sardonic expression, which consists in showing a canine tooth, Darwin sees an evident revelation of the hereditary tie which unites us to our first ancestors. These must have had very powerful canines, and probably made use of them as arms of defence.

I bow before the opinion of the great English naturalist ; but, as I have already said, I believe that that phenomenon of expression, the sardonic smile, as an expression of hatred is much more complex. Laughter and smiling are very frequent phenomena in the expression of hatred. They may be met with in people who would not be able to raise one part of the upper lip so as to show a canine. It is possible even to smile or laugh to suffocation while keeping the mouth shut, and this compressed laughter or smiling is the form most frequently associated with the expression of hatred.

If we investigated every case where laughter accompanied hating, we should perhaps find a clue to guide us to a logical explanation of the unexpected appearance of an expression which generally accompanies the gentle emotions or the gayer contrasts of the ridiculous. There is no laughter when wrath is in full eruption, but rather when hatred is mingled with contempt and disgust. We smile or we laugh when we have before us a humiliated and confounded adversary, or again when we are preparing for an explosion of wrath.

That which makes us laugh then is the contrast of our

fury with the humiliation of the hated person ; it is the joy of being able to avenge ourselves immediately, either by striking him, or by wounding his self-esteem. Thus laughter is much more frequent in the cruellest forms of hatred, doubtlessly because vengeance is the sweeter the more one hates, or the more one desires to be able to do evil to his enemy.

This is so true that very good people seldom laugh in their anger, because they suffer from it. Evil and cruel people, on the other hand, laugh because they rejoice to see suffering. And then there is another rarer and more diabolical form of the laughter of hatred, and at bottom this form resolves itself into a cruel instrument of torture.

A man laughs with all his heart to enliven his victim, and render more poignant afterwards to him the passage from hope to despair. He seeks to persuade his enemy that the latter has nothing to fear, and that he is happy and contented, in order to make him feel later the sharp thrusts of fury and of vengeance.

Thus many of the Carnivora act, especially among the feline species ; thus many savages, especially among cannibals.¹

I do not believe that these are all the reasons which may make us laugh in hatred. To blows, to insults, to the outbreak of every violence of our soul, we wish to add mockery and derision ; we wish to ridicule our victim, to make him pass from the tortures of fear to the humiliation of contempt, and above all to thoroughly show him that he is an object of ridicule to us.

The smile accompanies hatred so naturally that we often smile when we meditate on vengeance, even when the victim is not present, and then we stretch out our hand towards the horizon, palm downwards, as though to say,

¹ I have also spoken of the sardonic laugh, considered as a sign of contempt, in my *Physiology of Pain*, p. 326.

Wait. And this promised and sworn expectation is inevitably accompanied by a ferocious and satanic smile. Here the atavistic theories on the canine tooth can no longer play a part ; laughter is born from the contrast between the tranquillity which, according to our idea, the hated one is enjoying with the tempest which we are preparing to launch on him.

In children, savages, and the pariahs of our society, to put out the tongue and show its whole length to the enemy is a sign of contempt and aversion. In this act of expression there is more disdain than hatred ; and perhaps the expression is associated with that of spitting, either on the ground, or on the despised and detested person. This expression must be very ancient and very automatic, for we see it figured in the idols of Polynesia, of India, and of Mexico. For my part, I have seen chimpanzees and children spit as a sign of threatening or of wrath, although neither the one nor the other had ever learned this gesture from any living person.

The expression of rage and of hatred, as soon as it reaches a certain pitch, is always threatening, and is reinforced by movements of the hands and feet. Thus the fist is raised towards heaven, or perhaps we beat the air several times with the hand, the ground with our feet. When it reaches this degree, the expression of hatred is extremely expansive, and I cannot justify De la Chambre, "councillor of the king and physician in ordinary," who, in his work on the characters of the passions, has consecrated a whole volume to hatred, and who has still been able to utter the following heresy—

"Although hatred may be the most disordered of all the passions, it is one of those which least expresses itself in the face. It seems that, feeling itself guilty of the disorders which it causes in the reason, it would keep itself concealed, and is ashamed to become apparent. So that, apart from some looks and some movements which discover it, all the

other changes which come to the body while it is violently agitating the soul come rather from the other passions which accompany it than from itself."

Hatred may certainly remain dumb and concentrated, but then there is no longer any expression at all; in the same way that a man may love, rejoice, and suffer without any external sign coming to manifest his emotion outwardly. But as soon as hatred manifests itself, it is translated in an extremely expansive manner.

We feel, particularly in that special form of hatred which we term rage, the need of hurting ourselves and of breaking the objects which surround us when we cannot, or will not, strike the person hated or some one in his place.

Generally the degree of the injury which we do to ourselves measures the intensity of our rage; the value or the frailty of the objects broken may likewise give us very exact measures. At first we only give ourselves light blows, or slightly bite our lips or nails; afterwards we tear our hair and beard; we bite ourselves till blood is drawn; we may go so far as to wound or finally to kill ourselves. There is always a transformation of force, as also happens in pain.

Likewise in the devastation wrought about us in a fit of passion. We may begin with an innocent scrap of paper; then we pass to glasses, bottles, chairs, and, in the most serious cases, to mirrors, pictures, statues, or other objects of value. The more difficult the object is to break, the more noise we make in breaking it; the more costly it is, the more hatred we breathe forth in this transformation of psychical forces, the principal laws of which we have studied elsewhere.¹

The circulation is nearly always disturbed in rage; the movements of the heart are accelerated, or become irregular,

¹ Mantegazza, *Saggio sulla trasformazione delle forze psichiche. Arch. per l'antrop., e l'etnologia*, vol. vii. p. 285. Firenze, 1878.

in such a way as to present the phenomenon commonly known as palpitations.

Respiration is troubled, together with circulation; it becomes irregular, accelerated, laboured; all this is a direct consequence of the centrifugal currents which start from the brain, as well as muscular contractions.

Many of these troubles have become signs of the expression of rage; for example, sudden redness of the face, or, as it is commonly said, an inflamed face; gasping and prolonged respiration. This last sign, however, is so habitual in a certain form of cold rage, which we call impatience, or contained disdain, that it has become in a certain way characteristic of it. Dramatic artists should study with the greatest care the expression of impatience, or contained rage, because it offers pictures of great beauty and startling expressions. When one knows how to mark every degree of *crescendo* and *decrescendo* well, it is possible to awaken in the spectators the most powerful emotions. I should like to be able for the sake of dramatic artists to treat here of the proper domain, and of the limits of certain sorts of expressions, representing them as on a topographical chart, where the passage from one emotion to another should be figured by means of expression. In our case, for example, from simple expectation one passes to weariness, then to impatience, then to concentrated and breathless rage. In an inverse sense, from the volcanic and terrible explosion of rage, we redescend by degrees to impatience, to displeasure, and to weariness.

Howling, groaning, cries are at the same time different forms of respiratory troubles and psychical manifestations of hatred, but the cerebral element predominates in them. They are exits for the centrifugal currents of the emotion, and are at the same time menaces which are associated with other acts, such as clenching the fists, raising the arms, and gnashing the teeth.

Generally rage inflames the face; but on certain rare

occasions, when hatred has reached its paroxysm, the face becomes pale, then ghastly, and finally livid. This is certainly a consequence of the irritation of nervous centres, for it is produced suddenly and involuntarily, before one has time to think of placing a check on the passion which has utterly taken possession of him. In some people, who are but little expansive and at the same time very sensitive, rage shows itself only under this form. With the pallor are associated, in a way that forms a terrible picture, dilated nostrils, eyes fixed which seem to start out of their sockets, a static tension of all the muscles, which gives the idea of an immense force which is hindered from finding outward expression, and which is threatening the machine where it is developed with ruin. And, in fact, the organism, which is precisely this machine, often collapses. Recall the death of Sulla, of Valentinian, of Nerva, of Wenceslas, of Isabella of Bavaria, who all succumbed to fits of anger.

Often in place of howling or of cries, anger renders the voice trembling and hoarse, and even produces an involuntary dumbness, that is to say, an incapability of speech. These phenomena may be due to fear as well as to rage; and I have studied them in my *Physiology of Pain*.

If to all these elements of the expression of hatred you add muscular convulsions and general trembling, you will have completed the analysis of this terrible centrifugal energy, which poisons and consumes so many beautiful hours of life.

If we pass from analysis to synthesis, and collect into certain pictures the most habitual summary expressions of hatred, the most striking and the most distinct scenes which we meet are—

Rage, which we have already studied, and which besides is known to all as one of the most frequent expressions of human nature. It is the sudden explosion of a passing hatred, and often does no harm to any one but the person who gets into a fury. Precisely because it is a

violent eruption, it discharges all the nervous centres from all their tension, and leaves neither rancour nor hatred behind it. Thus proverbs in every age and in every nation have only praises for the man who is carried away by his wrath, and warn us to beware of *still waters*. Some unfortunate people have the infirmity of not being able to get into a rage ; their hatred being concentrated and condensed inwardly, profoundly alters their character and their fortunes, preparing the *vendette*, which last a whole lifetime, and psychical venoms so formidable that prussic acid and arsenic are nothing in comparison. It is always a transformation of force which becomes fatal to him who hates and to him who is hated, and which terribly increases the figures of criminal statistics. Blessed a hundredfold are those who stamp their feet, who tear their hair, who break glasses and chairs. Cursed are they who hold and concentrate their hatred and let it roast at the fire of an eternal rancour.

Jealousy and envy, which are combinations of mingled hate and pain, have no characteristic expression, but they take in turn that of rage or of mute hatred, of slow rancour or of rage which escapes in intermittent puffs like the smoke from a locomotive. In jealousy, love, hatred and pain may alternate or be confounded, while in envy the expression of wounded self-love generally predominates, which resembles so much the expression of the sensation of a bitter taste.

Contempt, fright, horror may be tinged with hatred, but with the expression of this emotion are associated the particular signs of disgust which we have studied in our analytical work.

Cruelty is a particular aspect of hatred ; but it plays by itself a sufficiently large rôle in the emotions and in expression to present to us its own special characteristics. It is possible to hate and to be impelled by hatred to the greatest extremities, yet without being cruel ; and on the

other hand, it is possible to have enough cruelty in one's composition to love to exercise it without the necessity of hating. Even among ourselves, in the midst of all the lights of civilisation, with all the checks which morality and religion impose upon us, we meet men who are born cruel, and who, prevented by certain reasons, good or evil, from doing ill to men, make animals suffer and delight in blood and massacre. This element of cruelty has a part in the vocation which impels certain men to choose the professions of butcher, surgeon, or executioner. I have known very good-hearted surgeons and butchers, who yet, in the exercise of their trade, betrayed enough satisfaction and ferocious sensuality to make one clearly understand that without the checks of morality and religion they would have certainly become barbarous assassins. Be present at an execution, a bull-fight, or a cock-fight, and watch the expressions of the spectators: you will certainly find horrible revelations there. At the sight of the gallows or of the *chulos* you will see certain involuntary spasms of sanguinary voluptuousness which will recall our anthropophagous ancestors and the great brotherhood of teeth and nails, which makes all living beings either the devourers or the devoured.

Phrenologists, to demonstrate the existence of the organ of destructiveness, which they place a little below the ears, have collected many examples of an irresistible tendency to cruelty. I shall only quote one, taken from among many others; it is that of a priest who became a military almoner simply to be able to be present at battles and to see the dead and wounded. He was in correspondence with all the executioners, even with those from distant towns, so that he might be warned when an execution was to take place, and he often went long journeys on foot that he might be present at them. He also liked to have female domestic animals at home, that he might cut the heads off their little ones as soon as they were born.

The expression of cruelty is almost exclusively concentrated round the mouth; perhaps because in terrestrial life killing and eating are two successive moments of one act, which is repeated every day some millions of times. The mouth is closed, the corners are drawn back as far as possible, while rising gently as though to give the outline of a smile, and often a shudder comes with the breath. The eye is clear, widely opened, and fixed upon the victim. Study the domestic and savage carnivora when they are exercising their function of maintaining the equilibrium of population, and you will see many pictures of expression which recur in men.

No face recalls the expression of cruelty so much as a wanton one. It is frightful, but it is thus. Love and blood, death and creation, alternate in this world at short intervals, and often without the curtain being lowered between the successive scenes. The hand fresh from killing caresses a moment later; the lip which has curved in the laughter of cruelty grows tender in a creative kiss.

Hatred, like every emotion in this world, may express some indelible characters on our faces. It is commonly said of a man that he has an envious, jealous, wicked, cruel, etc., face; in these expressions, which are supposed to be read on the face, there always enters some element taken from the expression of hatred.

This question will be more in place when we are treating of the criteria which may be employed in assigning its moral value to any face. Here we will only pause on the expression of *ferocity*. It may be permanent in a pariah of society; it may also constitute a race character in an entire people who understand nothing of our morality and who kill and eat their fellows to live.

Go and visit our prisons; you will find there many examples of ferocious faces—faces which express cruelty even when there is neither motive nor possibility of killing or of massacring. You will see these unfortunate people

show their ferocity in playing, in joking, in eating, and even in sleeping. I am sure that if one could see them testify their love, there would still be found this same expression of ferocity.

I have seen similar faces in the photographs of Maoris, Papuans, Negroes, North and South Americans. I have studied with my eyes this permanent expression in the Tobas, and among the different tribes who, under the generic name of Pampas (Tehuelches, Pehuelches, Ranqueles, Araucanians, etc.), inhabit the vast plain situated at the south of the Argentine Republic and of Chili. These men, who are so little sympathetic, constantly have wrinkled brows and contracted lips; an amiable or serene smile is never seen on their mouths; and if you meet them alone in the desert you will immediately put your hand to your pistol or to the reins of your horse, according to your courage, or your more or less combative mood.

However deceptive may be the opinions on character drawn from the face, however rare may be the spirit of observation in every age, still the most ignorant person in the world would feel himself quite secure in the midst of a tribe of the pacific Lapps; he would, on the contrary, feel full of distrust and terror under the *toldo* of a family of Pampas: for that it would be enough to look at the faces of his hosts.

Whoever has once seen in South America a Toba beside a Chiriguano could distinguish at the first glance which of the two belonged to a ferocious and cruel tribe, and which had the honour of belonging to one of the principal branches of this gentle and pacific race of the Guarani, made to love and obey.

CHAPTER XIV.

THE EXPRESSION OF PRIDE, VANITY, HAUGHTINESS, MODESTY, AND HUMILIATION.

AT every step in the study of the infinite number of expressions of which man is capable, we find confirmation of the law according to which expression is the clearer and more characteristic in proportion as it is provoked by a more powerful, by a better defined emotion. We perceive it in pleasure and in pain, in love and in hatred, in pride and in humiliation, which are the fundamental psychical movements of human nature, as ancient as man, and common to all the inhabitants of the globe. On the contrary, bashfulness, scepticism, religiosity are derivative feelings of the third or the fourth order ; they are only manifested after a long and painful evolution, and in consequence, their expression is uncertain, fugitive, variable, and but little characteristic.

Pride is one of the most manifest and powerful of the affective energies. Under different forms it is found in the child, in the old man, in the savage, and in the illustrious poet ; its expression is very significant and cannot be confused with any other, and therefore all artists, even the most mediocre, know how to represent a movement of pride, and the oldest and most superficial physiognomists have been able to give us a good description of the expression which belongs to this feeling.

The Greek Polemon devotes two characteristic lines worthy of Linnaeus to it—

“ *Signs of Effrontery.*—Here are the signs of the impudent : open and clear eyes, raised and thick eyelids, great

feet, a thick nose, a very upward glance, red complexion, sharp voice."

However, the definition of the proud by Giovanni Battista Dalla Porta is still more beautiful—

"They have arched eyebrows which are often raised, a large, fleshy, and hanging stomach; they walk slowly, stop without reason, and stand in the street looking round them."

Mgr. Ingegneri is more prolix, but he too gives a good description of the expression of pride—

"Men of great stature, who carry their heads high, prove thus that they are proud, ambitious, bold, and arrogant."

"In fact, this disposition of the body and the vice of pride have by chance a common origin. They arise, in fact, from the nobility of the reasonable soul, which, being excellent above everything else in this lower world, when it is appreciated at its right value disposes man to magnanimity. But it may happen that it exceeds measure in the esteem entertained for itself, and falls into a perverse and disordered appetite for pre-eminence, honours, respect; it is this appetite that constitutes pride, which is for the human race the source of many other enormous and extremely odious errors. This same nobility of the soul is the cause of man's holding himself vertical, and in some ill-balanced temperaments, where the principles which have caused the human body to acquire this custom are in excess, we see the person hold himself very straight, and disposed to carry his head high. In fact, nature, in distributing her gifts, has willed that plants (which have neither feeling nor movement, and are wanting in the faculties which our soul possesses) should have their feet turned towards heaven and their heads sunk in the earth (*sic!*). She has given to animals a disposition differing more or less from this according to their degree of perfection; she has so contrived that the most abject and the most vile have no feet and crawl on the earth; and to the

less imperfect she has given legs and has raised their heads more or less from the soil. But as man is more perfect than the animals, and because he is of celestial substance, she has willed that his head should rise heavenwards ; she has released him from the terrestrial heaviness which forces the other animals to walk bowed, and which would perhaps have made him incapable of acting and of accomplishing the operations of the mind ; finally, she has gratified him with an excellent temperament, which corresponds to the order of the elements of the world. In the world the earth, which by its nature is dry, is placed above the water, which is the cold element, and the air, which is moist, is inferior by its nature to fire, which is the warm element. In the same way, nature has willed that in the complexion of man the cold should be above the dry, and the warm predominate over the moist. And from the predominance of heat, which is the principle of upward directed movement, it results that man has a vertical and elevated body."

Truly we have here a mixture of cabalism and astrology ; but the basis of the description is taken from the pure sources of nature.

Nquietius has given us two well-drawn little pictures—

"Superbi viri figura."—*Supercilia arcuata et quæ frequenter elevantur : os magnum ; palpebræ valde apertæ, pectus latum ; metaphrenum erectum ; tardus gressus ; collum erectum ; humeri vibrati ; oculi splendentes, magni, salientes.*

"Verecuadi viri figura."—*Oculi humidi, non valde aperti, conniventes, castigatæ magnitudinis, suffusæ robore genæ ; motus moderati ; tarda loquela ; corpus inclinatum, aures decenti rubore purpuratae, verecundia potissimum in oculis et fronte spectanda est.”¹*

Ghiradelli, who, when he has not to speak ill of women, is reasonable, and knows how to observe, pauses a long time

¹ By the confession of Nquietius, this description is borrowed from Dalla Porta.

to explain why, under the influence of pride, the eyebrows are raised. He follows the opinion of Pliny, who places the seat of pride in the eyebrows—"Superbia alicubi conceptaculum, sed hic sedem habet; in corde nascitur, hic subit, hic pendet." Further on—"Nihil altius simulque abruptius invenitur in corpore." Giovanni Bonifacio thus interprets what Pliny means by the words *nihil altius*: elevated eyebrows, a sign of pride.

Why do elevated eyebrows denote a proud man? The theologian affirms that, *superbia est appetitus celsitudinis perversæ voluntarius*, and that thus pride manifests itself by raising the eyebrows above their normal place.

"The vice of pride consists in wishing to be admired, and believing oneself more than one is by the effect of an arbitrary and perverse will. Thus poets, when they have had to describe rage and pride, have always given as its sign and indication arched and elevated eyebrows. Dante, for example, says in Canto xxxiv. of his *Inferno*, in the portrait of Lucifer—

"S'ei fu si bel, com' egli è ora brutto,
E contro il suo fattore alzò le ciglia,
Ben dee da lui proceder ogni lutto."¹

Juvenal, too, has written in his Satire V.—

"Pauperibus miscere puer: sed forma, sed ætas
Digna supercilio, quando ad te pervenit ille?"

and this word *supercilio* is interpreted by some as meaning pride here.

And the same poet, wishing to paint Cornelia, mother of the Gracchi, said in his sixth satire—

"Malo venusinam, quam te, Cornelia mater
Gracchorum, si cum magnis virtutibus affers
Grande supercilium et numeras in dote triumphos."

¹ If he were as beautiful as he is now hideous, and yet dared to raise his eyebrows against his Creator, well from him may proceed all strife.

However, it is very necessary to remark here that the elevation of the eyebrow does not always indicate pride, but sometimes also gravity. Thus, according to Valerius Maximus, Seneca had *censorium supercilium*—that is to say, an eyebrow worthy of a censor.

Thus again, the Roman orator, wishing to paint, not the pride of a tyrant, but the gravity of Sextus, expresses himself with true Ciceronian eloquence—

“Tanta erat gravitas in oculo, tanta frontis contractio, ut illo supercilio, tanquam Atlante cælum, respublica niti videretur.”

Albertus Magnus likewise said—

“Supercilia, quæ frequenti motu elevantur in altum, superbum hominem notant, gloriosum et audacem.”

And commenting on the ancients, Ghiradelli adds—

“The proud generally have a slow and heavy gait and straight necks; they often stop in the road and look all round them; their eyes are unquiet, large, clear, and superb. Thus Homer has painted Achilles, and Nicetas Chorniatus has painted Andronicus. Likewise, again, Michael Scott, whom I choose by preference among all the other physiognomists, has written excellently—“Cilia arcuata multum et quæ frequenti motu elevantur in altum, significant hominem superbum, animosum, vanum, iracundum, audacem,” etc.

But we have had enough quotations. With relation to expression, the affective energies which are grouped round self-esteem give us three different groups of expressions—

1. Expressions of exalted or satisfied pride.
2. Expressions of humiliated pride.
3. Expressions of tempered pride, corrected by education, or by other feelings.

Making, according to our method, the elementary analysis of the expression of pride, we can represent its elements in the following table ;—

SYNOPTICAL TABLE OF THE EXPRESSION OF PRIDE.

	Elevation of the eyebrows.
	" " head.
	" " neck.
	" " trunk.
	Glance directed upwards or towards the horizon.
	Projection of the lower lip.
	Energetic closing of the mouth.
	Expansive expression of the arms.
Exalted or satisfied pride.	Rotation of the fingers round the axis of the arm.
	Elevation of the hands above the head.
	Ample dilatation of the thorax.
	The arms resting on the pelvis or the breast in such a way as to increase in one manner or another the transverse diameter of the body.
	A gawky walk with sprawling legs.
	Laboured breathing.
	Smiles, laughter, or tears.
	Lowering of the eyebrows.
	" " eyelids.
Humiliated pride.	Bending the head, the neck, the trunk.
	Glance fixed on the earth ; the eye dull.
	A generally concentric expression.
	Expression of a bitter taste.
	General tendency to abase oneself, and to hide or to flee.
	Lowering the head.
Hypocrisy of satisfied self-esteem.	A very brilliant eye.
	Abasement of the person.
	Gestures of excuse, of thanks, of prayer.
	Tears and laughter alternately.
	Contraction of the lips, as though one would diminish the size of the mouth.
	Trembling and suppression of the voice.

However varied and however numerous these elements of the expression of pride may be, they all tend to the same end : to augment and to raise our person if self-love is exalted and satisfied, to diminish and to abase it if pride is humiliated. Geometry and psychology, expression and language are here in perfect agreement. The English

haughty (etymologically, *haut* = high) means proud, and it is quite evident that *super* is the root of *superbia*.

A profound philologist would be able to weave all sorts of beautiful variations on this theme, of which I shall content myself with giving the general formula. It is with expression as with language. With all the force of our muscles we seek to make ourselves greater and taller than we are. From these two simultaneous and sometimes contradictory efforts very naturally results the puffed-out form of the expression of pride and vanity. We raise our eyebrows, eyelids, the upper lip, the neck, the trunk, the figure ; we seek to elevate all the principal and accessory parts of our ego, and sometimes we have recourse to the hatmaker and the bootmaker to aid us in this labour of elevation. Oh, if we could but nail a beam to the heavens and hoist ourselves into the empyrean itself !

So much for elevation. As to the expansion, we inflate our cheeks, we dilate the thorax, we rest our hands on our thighs or in our armpits, we sprawl out our legs and waddle from right to left and *vice versa*, we pass our hands through our locks, and distend our little wisps of hair ; in short, we seek to take up as much in width as we have gained in length, or in longitude what we have gained in latitude, as you will, according as you borrow a metaphor from grammar or from geography.

Having elongated, having widened ourselves, having increased every possible element of our organic geometry, we also extend our movements : our fingers are spread as far apart as possible, our legs are also stretched away from the trunk ; often we take into our hands any voluminous objects—handkerchiefs, papers, or books—to still further increase the dimensions of our limbs, to extend the horizon of our inflated ego. There is a characteristic manner of waving the handkerchief in the air, which in ninety cases out of a hundred bespeaks the man of pride.

And the last term of all this lengthening, widening, and

inflation in every sense is the loud breath which results from its long detention for the purpose of swelling the cheeks and rendering the thorax sonorous. Finally, the air must find an exit, and it issues with a loud noise, which serves additionally to attract attention.

For this reason, too, the proud generally speak loud, exclaim often, and employ every means of making a noise.

One cannot be inflated with pride without despising something or some one, or without disdaining the whole human race; thus in the animated expression inspired by this feeling there is always a certain smile of raillery, which is ironical, sardonic, or simply proud. The proud smile is distinguished from the two others by a forward movement of the lower lip. This is so true that the muscle which serves to execute this movement has received the name of *musculus superbus*.

Tears may often be the sign of the inner joys of vanity or of satisfied pride; but this is very rare; laughter is a more habitual sign, and between ourselves this laughter may still be naïve, benevolent, and loud. Sometimes it is accompanied by signs of quasi-delirium, of transports and convulsions. We have said a hundred times all expressions are alike and become confused when they are pushed to extremity.

India-rubber balloons cannot remain eternally inflated; nor is the distension of peacock, turkey, or men without its limits. A condition of slight and permanent inflation is the most ordinary expression of pride, and gives to the face a characteristic and lasting expression.

Its manifestation is always the same, but feebler, less accentuated, so that it may be maintained by muscles which are accustomed to being always in a state of semi-contraction. Even when asleep, a man may tell the one who looks at him that self-love is watching.

In a scientific work we employ the word *pride* in the most general sense, and this is not the place to make a

philological study on the synomys of this powerful affective energy, of this mortal sin. It is enough for us that each word should represent a thing which is well-defined and clear to all.

The *synonyms* and the *relations* of pride have distinct names, and each has a different method of expression.

We will review them rapidly.

Dignity, honour, loftiness are the most beautiful and highest forms of pride. Far from being vices, they are veritable virtues. The feelings of honour and of personal dignity are expressed rather negatively than positively. Often a serious face, an energetic attitude, suffice to express a whole world of psychical energies of the most sublime order.

In haughtiness we shall find ourselves between vice and virtue; the manner of expression becomes more combative, more resolute. In Darwin's work Figure 1 in Plate VI. might express equally well a disdainful feeling and a movement of pride revolted by a shameful proposition.

The habit of command, with which is always associated a certain degree of haughtiness or even of pride, gives to many generals, princes, and sovereigns a particular look and an aristocratic expression which are very difficult to define, but which at once strike the eye even of the most vulgar observer.

We all remember the look full of majesty and authority which shone in the eyes of Victor Emanuel; this singular character is also striking in King Humbert. Eight hundred years of royalty naturally leave in the features of a family a mark which the new-comer cannot acquire at will. Aristocracy is one of the most natural features of humanity; the democrats make history recede instead of advancing when they deny the most elementary laws of heredity and of human nature. An aristocratic bearing, which is always a fact of expression, is inherited and not acquired.

Vanity is one of the most characteristic forms of pride. It consists in a feeling of complacency in one's own beauty, one's own luxury, in the richness or the elegant cut of the garments of the wearer. It is a little pride adapted to little things and little men. Men, always disdainful towards women, would make pride and ambition the privilege of the strong sex and leave vanity to the weaker. In that, as in a hundred other cases, they take the lion's share, and they do not take into account that the difference does not depend on sex, but on diversity of character and on the degree of elevation of thought. There are plenty of vain, and of very vain, males; and woman is also capable of pride and ambition. I know an excellent man who has shown himself a valiant soldier on the field of battle, who is to-day a valiant writer, and yet he has never succeeded in becoming a speaker of any value in the Chamber. While he speaks he is always looking at the ladies' gallery, and takes much pains, above all, to wave his arm with a certain rounded suavity which will show off the beauty of his body and successively reveal and conceal the very pure profile of his face. This expression of vanity deprives his thought of all force, and his speech has neither action, efficaciousness, nor strength of feeling. It is true that Balzac would have awarded to this round sweep of the arm a *Montyon* prize such as he has already given to a movement of the skirts.

The expression of vanity is meagre, but slightly expansive, full of repressed smiles, of secret complacency, and hidden malignity. The painters and poets of all time have always represented vanity with a mirror; for it is precisely before a mirror that a beautiful person and one who is vain of his beauty—(notice that I say a person and not a woman)—abandons himself most completely to the expression of his admiration for himself.

Vanity is nearly always accompanied by coquetry, and has thus a composite expression, the aim of which is to be

seductive, to please and to fascinate. All animals in the species in which the sexes are distinct are capable of coquetry in an amorous intention, and it would be possible to compile a surprising volume if one collected all the pictures which the animal world presents in this respect.

The general formula of all coquetry consists in hiding or diminishing natural defects, in throwing good qualities into relief, or simulating them if they do not exist. In a company of men and women who have attained the period of their sexual maturity (or even if they have not attained, or have even passed it) there will not perhaps be one individual who does not exhibit some gesture, or utter some word referring to what the English happily call *courtship*. One continually gesticulates with his open and ungloved hand because he happens to have a very beautiful one; another is always drawing attention to his feet shod with such delicate gear, because they are extremely small. Countess A—— is always smiling, even if speaking of a funeral, because she has admirable teeth; and the Marchioness of Y——, although full of piety and modesty, is extremely *décolletée*, because her shoulders are worthy of a Juno. Prince X. always wears very tight trousers, even though it may be the fashion to wear them loose, because he has the legs of an Apollo; and his sister never takes off her gloves, even at table, because her hands are spotted. Spare me further enumeration, for every day you have a hundred opportunities of examining the expression of vanity armed with coquetry.

Ambition is an affective psychical form which has numerous affinities with pride, but which does not possess any characteristic method of expression; now it borrows that of pride, now of resolution, now of strife, or of creative inspiration. Without allegories and without the artifices of the schools the greatest painter in the world would not be able to represent an ambitious man. The allegories found, and the artifices put into execution, it is still necessary to

inscribe beneath, *Ambition*. This reminds me of a very mediocre monument in which a sculptor (a man otherwise of merit) had represented Politics, Strategy, and other analogous sciences, but had had to write these names below in golden characters. Is it possible that this great man did not call to mind the old story of St. Anthony and his pig?

Arrogance is pride plus one thing and minus another. Its additional factor is coarseness, its absent factor, good manners. Petulance, impudence, effrontery are the worthy sisters of arrogance ; in proportion as delicacy and modesty decrease, and as vulgarity of feeling predominates, the expression of these psychical movements becomes more and more degraded.

There are gradations of forms which correspond to the gradations of feeling. I have been face to face with the kings and emperors of Europe, I have talked with Colliqueo, the king of Araucania, and with the *cachique* of Paraguayans in Paraguay. All these potentates have made me perfectly perceive the distance between us, the abyss which separated them from me, but in a different manner. Colliqueo and the Cachique were arrogant and insolent ; the emperor and the king were simply majestic and haughty. A crown must always do something ; let it be of gold or of parrots' feathers, let it be the crown of a tyrant or of a constitutional king, it matters little, it is still a crown !

Of all expressions, that of pride is the one on which civilised life imposes the most powerful restraints, that it deforms the most and seeks most to stifle. Whenever we allow ourselves to be self-complacent in the satisfaction of our pride, we induce some suffering in the self-love of others, and directly we express our joy too ingenuously to him who is praising and applauding us we inevitably inspire him with the desire to change his praise into blame, or his applause to hisses. Enthusiasm and fashion impel us to

throw incense in the nostrils of a hero or of a dancer ; but we desire the hero or the dancer rather to be grateful than proud, and to confess to owing our bravos or our garlands rather to our good-will than to their merit. One must go to Africa to see men consent to crawl on their bellies in approaching their chiefs, and not to take offence if he chooses to spit upon them. You must go to Polynesia to see a street paved with human beings, stretched on the ground, and forming the road over which the bridegroom must pass to the house of his bride.¹ With us, kings themselves, when they enter Parliament amid a salvo of applause, incline their heads in token of thanks. Dramatic actors, placed on a level with the dancer and recalled two or three times, must bend low and not draw themselves up ; they must show some confusion at so much honour instead of becoming elated. If an actor or a dancer raises his or her head, neck, or body, and stands in an ecstasy amid storms of applause they would probably be thought demented, and would certainly be hissed. On the contrary, the more the joy of pride is concealed the more the applause redoubles : nothing charms us more than modesty during apotheosis. Then only do we abandon ourselves sincerely and expansively to the swift ecstasy of enthusiasm and admiration. The next day we shall compensate ourselves for the sacrifice we have made by venomous backbiting and malignant thrusts. Thus civilised man is constituted ; his nails are clipped, his teeth blunted ; but with these clipped nails and blunted teeth he is able to extract subtle venoms which he inoculates under the skin of his neighbour with pious unction and under the hypocritical pretext of distributive justice.

¹ Wyatt Gill, *Life in the Southern Isles*, p. 60. London.

CHAPTER XV.

EXPRESSION OF PERSONAL FEELINGS, FEAR, DISTRUST; DESCRIPTION OF TIMIDITY ACCORDING TO THE OLD PHYSIognomists.

THE love of self is certainly one of the most energetic feelings; it is perhaps the most powerful of all, save, during a certain period of life, that of sexual love. But it has no special methods of expression. No artist in the world, no matter of what genius, could pretend to give us a picture or a statue which should make us say at the first glance—Here is an egoist! here is a man smitten with himself! If in the secrecy of our chamber we can grow complacent in the adoration of ourselves, this affective energy will resolve itself into a form of vanity, into an expression of pride or of concentrated joy, but these confidential pictures belong to the gallery of pride, of vanity, and of pleasure. If, on the contrary, we fear for our safety, and if we put ourselves into a position of defence, in that case we shall wear one of the many expressions of fear or of strife, but we shall not be able to find anything which specially characterises self-love. If by sophistries and subtleties we at last imagine that we have laid hands on an egotistical face, our discovery will resolve itself into a pure negation, where we shall infer the love of self by reason of the absolute and constant want of every benevolent and generous expression.

In strict logic we might count the love of oneself among the personal feelings. But this pathological and monstrous feeling is resolved in its turn into hypochondria, into a general suffering of every sensible part of our being

which may lead us to despair and to suicide. I have studied this subject in my *Physiology of Pain*, and its principal features are reproduced in the chapter of that book which treats of the expression of pain.

Between love of self, above all a concentric and centripetal energy, the expression of which is consequently negative, and fear, we find distrust, which is the beginning of fear, a movement of the egoism which awakens to face an imminent or suspected danger. The same thing may be said of suspicion, which is the brother of distrust, and the expression of which is purely intellectual, with a scarcely perceptible tinge of preparation for defence.

Distrust, which is the beginning of the defensive, has a scarcely perceptible expression, which may be reduced to the elevation of the eyebrow, accompanied by transverse wrinkles on the forehead, the elevation of the upper lip, and a forced contraction of the mouth.

When we want to impart our distrust and suspicions to others, the expression becomes more marked, and encroaches on the domain of conventional language. It is then that we distort our faces, and especially the mouth, in such a way as to make them lose their natural symmetry entirely. We may also raise our shoulders and distort the body in the same sense as the features of the face; or again, we may shake our heads from side to side, turn up our noses, or finally apply the tip of the index finger to the cheek, the side of the nose, or the lower eyelid to pull it down. This gesture is nearly always accompanied by a prolonged *hum*, in the manner of the death-rattle, or of a snore.

Here we are on twofold ground, on a frontier where the automatic gestures of expression are mingled with figurative or conventional language. Some of the facts are easily explained. Others remain completely obscure.

The distortion of the face, nose, mouth—of all the body—demonstrates with plenty of evidence that the thing or person in question is neither clear nor *straight*, that there is

something false, that something is going *crooked*. Thus we say to turn up the nose is a sign of want of esteem, and hence of confidence. Still simpler is the explanation of the shaking of the head and of the numerous signs which serve to express a negation.

The elevation of the eyebrow indicates that we desire to open our eyes wide in order to see an obscure thing better; and, in my opinion, the same meaning attaches to the movement of the forefinger to pull down the lower eyelid. This gesture, which seems obscure to many people, seems to me only desirous of saying, "Here it behoves to keep one's eyes wide open!"

Some have perhaps gone very far to seek what lay quite near to them when they have attempted to explain this expression with some subtlety—"Look at this man; he squints, or is one-eyed: *cave a signatis*, and all that follows."

It is more difficult to explain why distrust or suspicion is also manifested by applying the finger to the cheek or on the nose. Probably these gestures are synonymous with the former of putting the finger on the lower eyelid. For my part, this last gesture would be the characteristic normal expression; the others would be its variations or synonyms. Expression often elaborates the same *motive* with diverse variations, and even in the most constant and most irresistible expressions we have many equivalent forms which alternate and are substituted one for the other.

Distrust, become a habit, often impresses a permanent character on the face, which may be considered as that of timidity. It is seen in all its force in the unfortunate insane, afflicted with the delusion of persecution. They have an uncertain way of looking round them; their eyebrows are raised, or perhaps the one raised and the other lowered; their look is vacillating from time to time, their lips contract, and they shake their heads, or perhaps they assume an attitude of attention, as though they were listening to real or imaginary noises.

This is disease; but outside the specially pathological domain there is also an expression of timidity characterised by diverse negative marks, such as the absence of lively joy, of tendency to strife, and certain positive signs, as the uncertainty of the facial movements and the disposition to blush easily.

We shall speak of this phenomenon, which plays a large part in expression, when concerning ourselves with the modesty which engenders on its own account a particular form, and one very characteristic of timidity.

It would be very useful to be able to determine, by the physiognomy of a man, his degree of timidity, and to measure thereby his want of courage. Who knows how many national mishaps, how many humiliations, might be avoided if science gave us the means of making such a diagnosis? Unfortunately, beyond the features which we have traced, nothing certain can be said, unless we give play to fancy and attempt to imprison clouds in bags. This poverty and this modesty of contemporary physiognomical science have succeeded to a period of overweening presumption which to-day makes us laugh. There is not an old book which does not give a sure receipt for the discernment of timid men. Here is that of Niquetius—

*"Timidi viri figura.—Ad mulieres, cervos, cuniculos, lepores, damas et temperiem frigidam refertur occiput cavum; color pallidus, sublividus, citrinus vel niger, oculi imbecilles et qui frequenter nictant, pallidi, stupidi; pilus mollis; extrema parva; lumba imbecilles; collum longum, gracile, pingue; pectus debile, carnosum; vox acuta, remissa, tremula; os parvum; mentum rotundum; labia patua; tibiæ, crura carnosa, sed nimine ostea; manus longæ et subtile; pedes parvi, inarticulati; mos qui est in facie maestus."*¹

The same author, in other parts of his work, explains how *quibus capilli surrectiones timidi—coxæ carnosæ timi-*

¹ Niquetii, *op. cit.*, p. 318.

*dum denotant—crura parva timidorum propria—quibus
crura pervertuntur timidi sunt—manus subtile et longæ
timidorum proprie, etc.*

In all the pictures of this sort the mode of procedure is perceived at a glance. The author, like every one else, has made the surprising discovery that women are more timid than men; he paints us the portrait of a woman under the pretext of painting a timid man, and the game is played.

It is singular that all the old authors attributed soft, that is to say, fine hair to the timid man.

Ghiradelli assures us "that fine and soft hair most frequently denote a fearful person," and he thinks it is very natural that it should be so, since the stag, goat, and sheep have soft coats. Further on this physiognomist does not fear to seek signs and indications among the birds, because, as Aristotle teaches, "all that have plumage are timid; for example, the quail and all gregarious birds, this habit being a manifest indication of their timidity."¹

Mgr. Ingegneri also says that smooth and soft hair is a sign of timidity.

"In fact," he says, "it denotes a cold and moist temperament, for softness principally arises from cold and moisture, and as effects resemble causes, hair preserves the predominant quality of the body whence it takes its birth. In moist and cold temperaments where heat is feeble there is not much of animal spirits, and as it is a principle that contraries fight against each other, they are weak. In imminent dangers, the soul, to fortify its courage, recalls its blood and animal spirits from all parts towards the viscera as to a centre, and the extremities are abandoned. But just as the spirit flies suddenly from the exterior parts to the interior, so externally also the man takes to flight. And there we have the nature of fear."²

¹ Ghiradelli, *op. cit.*, p. 7.

² Giovanni Ingegneri, *Natural Physiognomy*, p. 342.

What philosophy! what psychology! and what cabalistic jargon!

For the good prelate, a small head is also significant of timidity, and naturally he finds an excellent reason for this—

"In fact, our acts are the execution of the thoughts of the soul; and when the animal spirits do not acquit themselves of their functions well, the soul cannot discern the truth of external things, nor be assured of their condition; then it fears to act, and keeps to no resolve."¹

For Dalla Porta also the timid man has "a soft skin, a bent body, very thin muscles to his legs, a pale complexion, weak and blinking eyes. The extremity of his body is feeble and without force; his legs are slender (and women?), his hands slender and long, his loins small (and women?) and weak," etc.

Ingegneri and Ghiradelli agree that a *very black pupil (sic)* "certainly denotes a timid man, because such eyes are nearly always the indication of a timid soul. In fact, their origin is a superabundance of aqueous humour and want of animal spirits, and this is a sign that the natural heat is diminished, and that the temperament is removed from the suitable temperature, and allows the cold and the moist, which are the principles of fear, to predominate."

All these astrological divagations are yet nothing in comparison with a tirade of the same Ghiradelli, where this eminent *Vespertine academician*, forgetting that he is a Bolognese, and born in a town celebrated for centuries for the beauty and amiability of its women, puts us on our guard against beautiful coral lips. According to him, the smaller and more bewitching they are, the more they denote timidity, and a whole collection of vices and of perversity which spring from fear. Here is a specimen from this ungallant author—

"Read and re-read these short but veracious lines, all

¹ Giovanni Ingegneri, *Nat. Physiog.*, p. 341.

you who allow your hearts to be seduced by the beauty of women and by their eyes. Take the trouble to inscribe my words on your minds, as on an eternal marble, for I am going to show in life, as in a clear mirror, the error into which you fall, the iniquity that you commit, the danger that you create for yourselves with your own hands, when you become the insensate pursuers of a beauty, more fleeting than time, more ephemeral than a shadow, more unstable than the mind, and sooner faded than the flowers. But lend me yet more attention, you who adore as holy relics a little mouth and two delicate lips of coral, who print thereon your kisses, and thus a thousand times an hour plunge your soul into a living sepulchre. We allow that a mouth of small dimensions, adorned with two little curved rubies, is a feature of beauty in a woman ; but we will not admit that the sweetness of the kisses and the suavity of the words that you love to enjoy will not be accompanied by bitterness. It is not honey that you drain from these kissed and re-kissed lips ; it is a venom which penetrates to the soul, and living, slays it miserably with love."

And Ghiradelli, after having made us understand that small lips denote a disposition to fear, grows still warmer against the poor daughters of Eve—

"If this fear were the only passion of woman, the evil would not be great ; but it is not thus ; for so many faults spring from this that to enumerate them this whole volume would not suffice [note that it contains 628 pages in 4to]. So cold a humour has elected its domicile in the feminine brain that it renders the woman slothful to act."

To-day we are more gallant than Ghiradelli ; we no longer experience the same horror for mouths of small dimensions, adorned with two little rounded rubies. But, alas ! we can no longer divine, by the bare sight of a face, if it must lead us to the shame of Lissa or to the glories of Palermo and of Volturro.

CHAPTER XVI.

THE EXPRESSION OF THOUGHT.

WHEN thought is not accompanied by pleasure or by pain, by any feeling or emotion, the expression characteristic of it is but slightly marked and very concentric. Still this does not prevent the labour of the brain possessing a genuine expression proper to itself.

Intellectual expression may, by its different movements, denote either the intensity of thought, or its nature, or a certain moment of its activity; or even it may accompany with sympathetic rhythm the movement of the grey matter which thinks. Such are the diverse functions of intellectual expression. They must be studied consecutively; and afterwards, when once the analytic work is completed, it will be possible to co-ordinate the collected materials, and to point out certain laws in a domain which is one of the least explored of physiognomy. In old authors we find cabalistic descriptions of the intelligent and of the stupid man; in more recent physiologists we find some good studies on attention and reflection; but I believe that no book presents a complete view of all the phenomena of expression which accompanies the exercise of thought.

To quickly demonstrate the rapidity with which the lacunæ left by the ignorance of the past accumulate, we must compare Plate 2 of Lebrun's work, in which *attention* is represented, with the beautiful monograph of the same phenomenon which Paolo Riccardi of Modena has recently given.¹

Lebrun shows us a face, drawn with much art, but which

¹ Paolo Riccardi, *Studio sull' Attenzione*.

might represent just as well suspicion or desire. His analytic diagnosis is limited to three lines—

"The effects of attention are to lower the eyelids and make them approach the side of the nose, to turn the pupils to the object which causes it, to open the mouth, and especially the upper part, to slightly lower the head, and to render it fixed without any remarkable alteration."

Here, however, as an introduction to our studies, is a synoptical table—

SYNOPTICAL TABLE OF THE EXPRESSION OF THOUGHT.

Muscular contractions and relaxations of the face.	Contraction of the corrugators of the eyebrows.
	Fixation of the eye.
	Erratic contractions of all the ocular muscles.
	Static immobilisation of all the muscles of the face.
	Exaggerated opening of the eye.
	Closing, or semi-closing, of the eye.
	Dropping of the under jaw.
Contraction of the trunk.	Extreme elevation of one eyebrow only.
	Partial or total convulsions of the facial muscles.
	Static immobilisation of all the trunk.
Sympathetic and most frequently rhythmical movements of the limbs.	Catalepsy.
	Partial or total convulsions.
	Scratching the head, forehead, or nose.
	Touching the hair.
	Striking the forehead or holding the head in one or both hands.
	Stroking the cheeks or chin.
	Vigorously rubbing the eyes.
	Shaking the head.
	Making rhythmical gestures with arms or hands.
	Making rhythmical gestures with feet or hands.
	An incessant and rhythmical movement of the legs.
	Closing up the ears tightly with both hands.

From the first moment that the cerebral cells begin to think, their activity never ceases until we breathe our last. It probably persists even during sleep, and those who imagine

that they do not dream have only forgotten by the morning the shadowy thoughts of the night. Awaken them suddenly, and call their attention to the state of their consciousness at this precise moment. Nearly all will tell you that they were dreaming. I have often made this experiment on myself and on others, and it has always given me the same result.

This continuity of thought is depicted on our countenance in a slight expression which is almost imperceptible, precisely because it is permanent and is confused with other constant characteristics which distinguish the face of the living from that of the dead. A certain vivacity of the eyes, a certain promptitude of the facial muscles to contract, are the fundamental features of every intelligent face, and when these traits are wanting we say that we have a stupid face before us. We shall return to this subject when treating of the criteria which may guide us in appreciating the intellectual and moral value of a human face.¹

¹ Lavater, in the fourth volume of his great *Physiognomical Bible*, has given us many very beautiful drawings of stupid people, after nature or after Hogarth. It seems incredible that with a few strokes of the pen, which would not cover the surface of a penny, it should be possible to depict so unmistakably idiocy and stupidity.

According to the celebrated Swiss physiognomist, the most striking characteristics of stupidity are—

- (a) An absolutely vertical forehead.
- (b) An excessively long forehead.
- (c) A forehead which projects more or less above.
- (d) A forehead which retreats abruptly, and which is convex near the eyebrows.
- (e) A nose which is much curved below the middle of the face.
- (f) An exaggerated distance between the nose and mouth.
- (g) A soft and hanging lower lip.
- (h) The relaxation or wrinkles of the chin and of the jaws.
- (i) Very small eyes, the whites of which are scarcely seen, especially when they are associated with a large nose, and the whole lower part of the face is massive and the eyes surrounded by small and very deep wrinkles.
- (k) The head thrown back and disfigured by a double goitre, especially when one of these reaches towards the cheek.

The expression of the intellect is centred in the head, the principal seat of thought, and in the eye, which is its principal instrument. To convince ourselves of this, it is enough to compare the face of a blind man without eyes with that of a blind man who has eyes incapable of sight. The first always appears more stupid than the second. Although with practice we succeed in interpreting the expression of the muscles of the mouth which is

(1) An oblique and affected smile, of which one cannot get rid, and which has become a habit, may be unhesitatingly considered as the indication of a false nature, of advanced insanity, or at least of idiotic malignity.

(m) Excessively rounded or too closely united forms give an air of stupidity to a face, and in this case the reality nearly always corresponds to the appearance.

(n) Flat noses with very narrow or very wide nostrils, and the nose disproportionately long to the rest of the face, generally suggest a low intelligence.

"Involuntary contortions and convulsive movements of the mouth, vibration, rigidity, or excessive softness of the flesh, flattened and rounded contours, features too much or too little accentuated, too much tension or relaxation, an odd mixture of delicacy and triviality, in a word, disproportions of all sorts, are *so many imperfections or signs of imperfection*; they are at once *the sign and the thing signified*."

Although it is Lavater who writes, what uncertainty in the strokes, what cabalism and astrology! There is not a line which is not contradicted elsewhere, although in each line there is some truth.

The definition of the mediocre man, which he gives further on, is happier (Fig. iv. p. 16)—

"Every individual who does not strike us in some way, who neither attracts nor repels us, who neither wearies nor charms us, who does not make himself either welcome or detested, who is neither rich enough to give nor powerful enough to despoil, who leaves everything in its place, who produces nothing himself and has not enough energy to steal the productions of others, makes one of the numerous class of the mediocre."

Certainly, he who knows how to draw such a portrait of mediocre men is not himself a mediocre man, although he may add—"These mediocrities are absolutely indispensable to maintain, consolidate, and complete the order of creation. Only the insensate can despise them, the impious only and the wicked can look on them as useless. . . ."

substituted for the expression of the eyes, a face without eyes makes one afraid, and recalls almost too nearly that of a corpse.

If it were necessary to limit to the least possible space the field of the expression of thought, if it were necessary to reduce it to its principal centre, I should confine it to the space of a few square centimetres which stretches above the eyebrows and between them ; it is precisely there that are manifested those vertical wrinkles so well studied by Darwin, and which constitute the act of wrinkling the eyebrows. These, by the contraction of the superciliary muscles, are approximated and lowered, while at the same time two more or less deep folds are formed between them. On the contrary, in suffering, the internal extremities of the two eyebrows rise and many transverse wrinkles are formed.

The muscle which wrinkles the eyebrows was called by Darwin the muscle of reflection, and although his theories do not stand criticism, yet it is true that the first gesture of intense attention and of reflection consists in wrinkling the eyebrows, and that this movement has been observed in the Australians, the Kaffirs, the Malays, the Hindus, and the Guarinis. For Darwin the origin of this characteristic gesture is very clear, because it recalls the first impressions of disgust, and because it is uncomfortable and even painful to observe and reflect for a certain time. There may also, according to him, be a phenomenon of atavism here—a legacy from remote time when it was necessary to look into the distance to perceive one's prey and to put oneself on guard against a danger.

This explanation, although ingenious, is probably a little strained. I believe, on the contrary, that we have simply to do with a fact of sympathy by contiguity, just as we have in sexual and gastronomical emotions, facts of expression due to sympathy, which are manifested in the muscles near to the centres of emotion, without these movements having any direct utility in the satisfaction of our

needs. To me the act of wrinkling the eyebrows has the same value as that of opening our eyes wide when we hear some beautiful piece of poetry read.

Attention is the intense and visible direction of one of our senses towards an external object, or again the invisible direction of the nervous centres towards a phenomenon of the visceral or of the psychical life. I shall reserve the word *attention* for the senses or for the facts of splanchnic or general sensibility, and that of *reflection* for the examination of psychical facts.

We can bring attention to bear on any sensation of taste, smell, or touch; but the expression is much more marked when the eye and ear are the organs employed to collect the impressions from the outer world.

In visual attention the body leans forward, the eyes are fixed, and all the muscles of the neck and of the trunk seem to have no function but that of directing the organ of sight, and of bringing it near to that which we wish to see well.

In auditory attention, after having advanced the head in the direction whence the sound proceeds, it is odd that we lean it on the shoulder (oftenest on the left shoulder) as if we would listen with one ear only.

This gesture, which is very characteristic, and which may be observed every evening at the theatre, would deserve to be well studied. It would be interesting to see if each of us puts his best ear nearest to the sound, or if, on the contrary, he tries to have the sensation of a single acoustic organ, as happens often for the eye.

The expression of attention relating to the three other inferior senses is uncertain, although it often affects a local character; often it is modelled on that of ear or eye, although there is nothing to do with seeing or with hearing.

Inner attention may only be a concentration of consciousness on a visceral or psychical phenomenon, or it may rise to comparison, to reflection, in a word, to thought. In

these very different cases expression is nearly the same. A hypochondriac, who watches the movements of his intestines and of his heart, differs little in appearance from a philosopher who is meditating on the consciousness of the ego.

As soon as reflection has become intense and profound, expression becomes almost entirely negative, as if all our energy must be concentrated in the brain, and we do not retain sufficient to contract a small group of muscles, or even a single muscle. In fact, the superciliary muscle relaxes and the look wanders without fixing itself on any object. We look up or down, and these two opposed directions have exactly the same end, namely, of isolating ourselves from the external world which surrounds us. Darwin, Donders, and Gratiolet have studied this fact which we may express by the term, an *absent look*.¹ Let us remark on this connection that the impropriety of the term could not be greater. We say a man is absent when he pays attention to nothing, and again we call the look of a man who is plunged in profound meditation, absent. And yet we are always singing the praises of language, this pale and uncertain shadow of our thought!

The more intense thought becomes, the more all inner-vating force deserts the muscles. It is then that the mouth partially opens, then entirely, and finally the lower jaw drops. Then the face assumes the appearance of stupidity, furnishing us with yet another example that in all forms of expression extremes touch and mingle.

But directly thought is disengaged from the cerebral centres and is manifested by one of its powerful centrifugal currents, and especially by word, then the expression passes from concentric to eccentric, and we witness phenomena of expression ensue, which in our table we have enumerated under the rubric of *sympathetic and most frequently rhythmic movements of the limbs*.

¹ Darwin, *op. cit.*, p. 229.

It is then that we bring the upper limbs into play, and accompany the cerebral action by gestures of very various form, but which always tend to give rhythm to the thought, by marking, after the manner of commas and full stops, the most striking parts of the discourse. No one in the world (except he is making an effort for that special purpose) could speak without gesticulation, and many eloquent and impassioned orators would die of suffocation if we compelled them to make a speech with their limbs bound to their bodies. Even the lower limbs take part in this accompaniment, and many people could neither speak nor write unless they were to keep their legs in movement or beat with the feet.

This expression is quite different from that which consists in striking the forehead, playing with the hair, caressing the chin, or scratching the nose. It is probable that all these movements have as their end to aid the brain and to facilitate cerebral work. The friction of the skin of the face might contribute to the same result by means of a peripheral excitement of those nerves nearest to the brain. I am so much the more inclined to adopt this explanation because it is especially the scalp and the forehead that is rubbed, and much less often the nose, cheeks, and chin. That a mechanical impulse to the brain may facilitate its labour appears proved by the fact that many people can only think actively when driving, riding, or boating. Each brain has its special needs, and in all men the end of intellectual expression is especially to aid its work. If we pass from analysis to the synthetic study of intellectual expression, we find some pictures which in their diverse expressions represent special forms of cerebral labour. Here are the principal—

Attention
Reflection
Meditation } Already examined in our analytical table.

Remembrance.—The look is fixed upwards or downwards

and the eyes closed. The forehead is energetically rubbed with the palm of the hand, or struck in diverse ways. Here the influence of percussion to awaken molecular movements in the brain is quite evident.

The Labour of Speech.—The face lights up ; the eyes, the neck, the trunk, the arms move sympathetically with the thought expressed ; now the gesture marks the pauses and colours the ideas ; now it plays the parts of the chorus in antique tragedy. The word is the principal person, the gestures are the chorus which follows the thought to reinforce and to complete it. No one can be a great orator without knowing how to direct his gestures well ; and in some eloquent men gesture is still more effective and more beautiful than speech. Disagreement between speech and gesture is one of the most irritating manifestations of mediocrity of mind, and often it is enough to show us that a speech has been committed to memory without being understood. On the other hand, in those who speak with difficulty, gesture is too often before the word, it seems as though it would drag the latter from its narrow confines and struggle to find a new issue.

Mechanical, Artistic, and Scientific Labour. — These different forms of intellectual labour are also differently expressed. A man devoted to mechanical work and a sculptor express inner labour almost exactly in the same way, and in the muscles of the hand and of the mouth a special expression is concentrated which I will call plastic. There are certain features of the hand, almost indefinable, which are peculiar to the sculptor. It seems as though the stone under his hands lives and speaks ; the eloquent shorthand of their movements may make us understand how the form thought of in the artist's brain passes through his fingers to be incarnated in the plastic and docile matter which is modelled under his inspiration.

In the painter, on the other hand, expression is related to the eyes rather than to the hand or mouth ; the eyes

anxiously seek for perspectives, colours, and figures which may correspond to the inner thought.

Scientific work is too varied to have a single method of expression ; it is generally expressed by a mixture—assertion and meditation. But it is considerably modified, according to the instruments used in the search of truth.

Poetic or Imaginative Work.—In this work imagination and the emotions often play a great part ; thus its expression derives its force and its warmth from these special conditions ; also the intensity of the energy disengaged is great enough to suffice in itself to give the expression an expansive and eccentric character. Mediocre men, who have never understood what inspiration means, are the only ones who believe that it is possible to write *di maniera*, and to move others without having been moved oneself.

Old Horace, who had a long experience of art, pronounced the ostracism of these gentlemen long centuries since ; *si vis me flere, dolendum est primum ipsi tibi*, he wrote. Every classical page, whether in verse or in prose, which makes us weep or which leads into higher and ideal regions, was written by a hand trembling with emotion and under the inspiration of the god who disturbed and fluttered the entrails of the creator.

I would almost say that all artistic and scientific labour, if it rises to the height of creation, has its peculiar character of expression, which is to be measured by the intensity and not by the nature of the emotion. There are some expressions which only belong to genius, and if we had a photometer which could measure the light issuing from the eye, we might perhaps judge of the value of a statue, of a picture, of a poem, or of a book by the vividness of the light that gleams in the pupil of the artist or the writer.

I once employed a very coarse sort of photometer to discover if a young man among my friends had shut himself up in his room to occupy himself with some literary

work which had to be presented before a meeting. I suddenly called him for an affair of importance. Directly he issued from his voluntary prison his inspired look and inflamed face revealed to me what I wanted to know. It would be easier for a woman to hide a happy love than for a man of genius to hide the god who possesses him.

The expression of creative genius is one of the most beautiful and the most sublime which humanity presents. That art may represent it, the artist must himself be a man of genius. We may all experience rage or pleasure, despair and love; but genius is the privilege of a few, and the gleam of the creative artist's eye is a jewel before which the brilliancy of all the diamonds and sapphires in the world pales.

Lavater, a profound observer, the friend of several men of genius, and perhaps himself a man of genius, wrote some excellent pages on this subject, of which I should like to give the reader an example before concluding this chapter.

"For the rest, whatever genius may be, its character and nature will always be best revealed by the eye. Look for it in the look properly so called, in the fire which animates it, but above all the drawing of the upper eyelid, considered in profile. All other distinctive signs being absent, I shall always hold to that which has never deceived me. I do not consider that I have looked at a man until I have noted this contour. If this single feature is positive and decisive, all the rest matters very little to me. If sometimes it so happens that I have not the time or the opportunity to study a physiognomy well, I at least observe the upper eyelid. Often no more than this is necessary to measure approximately, but with sufficient exactitude, the intellectual faculties of a child, in spite of my ordinary repugnance to form a judgment on a face which is not completely developed. . . .

"One word more on the look of a man of genius. First I

shall point out a peculiarity which is neither very frequent nor very marked, and which is the more difficult to reproduce in drawing on account of its rarity. In addition to those gleams of fire, those penetrating and rapid flashes which may be explained in a certain manner by the conformation of the eye, that of the man of genius has *emanations*. Whether these emanations are real, like those which escape from luminous bodies, or whether they only result from the movement of that matter which we call light, a magnetic or electric fluid, it is not the less true that the eye of genius seems to have emanations acting physically and directly on other eyes. I do not speak of substantial emanations, which would be an absurdity. I still less pretend to determine the nature of these emanations; but I refer them to a circumstance of fact, which has become proverbial, which is confirmed by experience, and which can only be again called into doubt if we admit a difference between colours. If it is true that every body reflects light in a manner peculiar to itself, which retains its essence, or at least recalls it, by a certain affinity, it must be that every eye gives to its rays the direction and vibrations proper to it, and consequently the rays which issue from the eye of a man of genius may produce stronger sensations than those from that of an ordinary man. I find again the indication of this vivid look in the portraits of Cardinal Retz, of Van Dyck, and of Raphael. The look of genius with all its fire is irresistible, miraculous, divine. All those who have been struck by it bend the knee before it; they lower their eyes and worship.

"True genius in all its strength sheds light wherever its look falls: it dominates all whither its steps turn; it attracts and repels at will; it can do all that it will and it will not all that it can. The summit of elevation reached, it believes itself small because it sees above its own sphere a world of geniuses of higher forces and greater effects: the higher

it rises the more it discovers the immensity of the spaces which still remain for it to cross."¹

For my part, I dare affirm, after a long experience, that men of genius may have existed ugly as Æsop and beautiful as Raphael or Goethe; but all have had a fiery, indefinable look which is never met with in an ordinary man, and in which seem to be concentrated all the enthusiasms of life, all the splendour of light, all the energy of thought and of will.

¹ *Lavater, op. cit.* and iv.

CHAPTER XVII.

REPOSE AND ACTION, DISQUIETUDE, IMPATIENCE, EXPECTATION, DESIRE.

CHARACTERS OF EXPRESSION ACCORDING TO AGE, SEX, TEMPERAMENT, CHARACTER, EDUCATION.

EXPRESSION does not only serve to express pleasure and pain, love and hatred: it may also be translated into a general condition which relates neither to health nor to sickness, but rather to a particular condition of our sensibility of our psychical forces. It is thus that looking at a man we can say whether he is resting or preparing to act; that he is disturbed or impatient, that he is expecting or desires. As life is a continual succession of changes of conditions, it is almost impossible that a countenance should express nothing in particular. This is so elementary a truth that a child standing before a statue will ask, *What does this man or woman mean?* And when we find no answer to this inevitable question, we remain discontented and perplexed, and after recognising the impossibility of satisfying it, we say with a certain contempt, Here is a beautiful statue, but it has no expression. How would it be possible that a human creature should tell us nothing either of his past, or of his present, or of his hopes or desires for the future?

To my mind, this is the chief difference between the works of the Greek sculptors and those of the moderns. In the former I always find an expression, even though it may be simply the expression of life. I see the muscles palpitate under the skin. In the others I only see the

skin: the muscles do not exist, or say nothing. To convince yourself that this is so, you have only to look at the Venus of Medici or of Milo, and afterwards at a Venus of Canova or of Thorwaldsen, who are yet those among the moderns, the two who have most zealously studied the ancient masters. An abyss separates these masterpieces, because we have before us two different pages from the history of art. Of course it must be understood that I take for purposes of comparison only those statues which do not express violent emotions, and not those which present strong contractions, convulsive spasms, or an exaggerated expression. In these latter, even the most mediocre sculptor is obliged to put something under the skin of his statue which shall move, palpitate, shall proclaim aloud that which the artist has wished or believed himself to have expressed. The ancients cared neither for contortions nor for spasms; but they knew how to make the statue of a man or of a woman express a multitude of things in a language the secret of which modern artists seem to have lost. Let us hope that some day it will be recovered! The beautiful human being, even in passion, is so beautiful in itself: it can say so much! Never, to the end of all time, will the eyes of the sons of men tire of admiring the Venus of Milo, and that without any need of stimulating our luxury or awakening our tenderness. Life in repose—calm, serene, contented in itself—presents so many and such tranquil expressions of beauty that it can never be exhausted.

Therefore I contemplate with increasing admiration the beautiful statue of the Shunamite, in which my excellent friend, the eminent sculptor, Adelaide Pandiani Maraini, has represented the beautiful captive of Solomon quitting the gilded palace of her master to return to her shepherd. Here there is no painful or vulgar emotion, no strained contraction of the muscles: the whole being, in the general attitude of its expression, seems to proclaim aloud the words of the Bible—I seek him whom my

soul loves. The whole body, head, neck, and eyes are strained towards a point which draws and fascinates her. With the left hand she modestly raises the hem of her garment to avoid stumbling, and she opens the right as though she would already touch and caress the friend of her heart. Regarded in the light of the science of expression, it is one of the most habitual and simple of attitudes; in the light of the æsthetic, it is a reminiscence of Greek art, so Olympian in its calm, so serene in its incomparable tranquillity.

Few expressions are so general as those of *repose* and of *action*. In this case the face is less significant than the whole attitude of the body, which is disposed either for the relaxation or the contraction of the muscles.

It is impossible to rest well standing; thus the expression of repose only occurs when one is sitting or lying. The more the body approaches the perfectly horizontal the more significant is the expression of repose and laziness.

Just as before shutting up an instrument in its case we fold it up, so, as it seems, the man who is about to rest bends his head upon his neck, and the different parts of his arms and legs seem to double up in turn upon themselves. The elbows rest upon the knees, and the head on the palms of the hands.

Thus we reduce muscular contraction as much as possible, and we leave the work of keeping us in the sitting posture only to the most powerful muscles, which are nearly all situated in the hinder part of the body. But if fatigue is greater, and the need of repose more imperative, a large number of the muscles must cease to work. Then we quit the sitting posture for the semi-horizontal or horizontal, passing through several stages, first seeking supports for the lower limbs, then for one arm, then for both, and finally for the whole trunk and the shoulders.

The hammocks of the tropics, the bamboo seats of India—so luxurious and cool—all our beds and our sofas lend

themselves to these different positions and to all these degrees of repose and muscular relaxation. The variety of form of all these articles of furniture has been suggested by muscular experience, and also by the difference of climates and the degrees of indolence in different races.

The most intense expression of repose is almost entirely negative; it is confounded with that of sleep, which is supreme rest, since consciousness itself ceases to labour. The expression of sleep is very characteristic, but every one may feign it. The commonplace artist alone leaves us in doubt whether he intended to represent *repose*, *slumber*, or *death*. The great artists can make us understand the degree of fatigue, and if the relaxation of the muscles which slacken is associated with pain or pleasure. There is voluptuous repose, and repose mingled with exhaustion; there is the repose from labour and that of idleness. The artist who can observe nature expresses all these shades.

The expression of action is diametrically opposed to that of repose. Even before a struggle is commenced or a resolution taken, the body which was drawn together seems to open out, and set its joints, and to prepare for work. You see the neck pulled up, the head forsake its supports, the arm raised, and the trunk upreared; the lying is abandoned for the sitting posture, then this for the standing. Even if one remains lying, a strong contraction of the trunk, or a sudden movement of the neck, which raises the head, suffices to express the action about to begin, or in preparation.

Still the most characteristic of all these movements is the firm closing of the mouth. This fact has attracted the attention of all those who have written on physiognomy and on expression.¹

¹ Darwin, *op. cit.*, p. 235; C. Bell, *Anatomy of Expression*, p. 190; Gratiolet, *De la Physiognomie*, p. 118; Piderit, *Mimik und Physiognomik*, p. 79.

The movement of closing the mouth is a constant and significant sign, that of determination on or preparation for a struggle; thus those with large and prominent chins are deemed obstinate and firm, and, on the contrary, those with small and retreating chins feeble and hesitating. There is a great deal of truth in this popular belief, whether it be because the chin is one of the progressive characters which distinguish man from the apes, or because obstinate and pertinacious people are frequently called on to close the mouth and push forward the chin.

We close the mouth before making an effort, and enlarge the thorax with a deep inspiration.

I do not think that this is done, as Gratiolet argues, to retard the circulation, but rather to give a solid point of support to certain muscles which are attached to them, and to amass a good provision of oxygen in view of the consumption of muscular energy which we are preparing to make. This is so true that we hold our breath before shooting at a target, threading a needle, or accomplishing any action which demands much attention or is difficult to execute.

We do not wish to expose ourselves to interruption by the necessity of breathing, and we hold our breath, either to make provision of air, or to give a solid point of support to the muscles. Unless I deceive myself, my theory completes that of Bell and Darwin, and is opposed to that of Gratiolet, which takes the effect for the cause.

Bell remarked, with much justice, that when two men are going to fight or murder each other not a cry is heard; they keep the profoundest silence, and when the cry escapes it is because the blow is already struck and there is perhaps already a victim.

Disquietude, impatience, expectation, desire, are general conditions which may be produced by the most different causes, but which are expressed in a different way according rather to the degree of the emotion than to its particular

nature and its origin. One may become unquiet, impatient, in consequence of feverish discomfort or of suffering, or because of an ardent desire, or because a loved person is expected; but in these different cases the expression is nearly the same.

The habitual character of *disquietude* is the rapid contraction and relaxation of antagonistic groups of muscles; the movements are accelerated and alternate at short intervals; thus we continually change attitude and position. The gaze itself is as uncertain as the movements of the trunk and the limbs.

Impatience differs little from *disquietude*, but its cause is more often moral, and it is associated with an abstracted look and signs of denial and repulsion; it is only possible to be impatient at times and for special reasons. When impatience is increased, its expression is confused with that of the first degrees of rage; respiration becomes deep and gasping; a word or a syllable is repeated; and rhythmic sounds are uttered to distract one from the cause of preoccupation. In impatience and in boredom the balancing of the body and the limbs from side to side is a very characteristic sign.

The expression of *expectation* is the same as that of desire or of impatience, according to circumstances. When it is neither associated with desire or impatience, it has the entirely intellectual expression which we have already studied.

Desire is a certain degree of the most different emotions, for we may desire through love and through hatred, through gluttony and through pride. Its expression is composed of expectation and impatience, it may also be mingled with that of disquietude, and it is further impregnated with the special character arising from the inspiring cause. Lebrun gave us the face of *Desire* in Plate 7 of his Atlas; but his drawing rather expresses attention; and by somewhat forcing the lines we get the expression of

luxuriousness. The commentary which accompanies the drawing is no better.

"This passion causes the eyebrows to press together and to project over the eyes, which are more widely open than usual, the inflamed (?) pupil is not in the middle of the eye, the nostrils are raised and pressed to the sides of the eyes, the mouth partly open, and the thoughts that are moving within give a vivid and warm colour."

I recommend to artists as models of expression of a general order the face of the drunken man given by Lavater (vol. i. p. 155, 4th edition), and that of the father rebuking a perverse son whom he loves profoundly. These drawings need neither commentary nor explanations; the expression is perfect: it is the most eloquent imitation of nature. The face of the drunken man reminds us that imperious, invincible slumber has an identical expression; thus it is said—*I slept like a drunkard, I slept like the dead.* And thus the analogy of expression corresponds to the synonyms of language.

I do not pretend to have spoken of all the general conditions of expression which are not due to a special emotion; but if to those which we have studied those of health and sickness, and that of intellectual labour, are added, I think that we shall have reviewed all.

It is, however, necessary to treat another subject which concerns expression generally and the character given to it, not by the special cause which provokes it, but by the nature of the individual in whom it is produced, or by the particular conditions in which he finds himself at the given moment.

Each of us has his own *particular style* of expression, as of writing, of dressing, and in so many other things, high or low, which our life, so short and yet so complicated, involves.

The manner of gesticulating is so intimately related to our nature that we may affirm with certainty of two people

who are alike in face that they will express their emotions in analogous ways. It is customary to say that imitation contributes to this analogy in families and in races. I believe, on the contrary, that similarity of nature has a much greater influence. As long as I live I shall remember the strange impression which the Governor of Santa-Fe, Don José Maria Cullen, made on me when he stood before me in his palace, where I was visiting him for the first time. He was so like my poor friend, Dr. Broglio, that I thought I saw the latter alive again and standing before me. But after he had greeted me, I found such identity in his gestures with those of my friend that I was stupefied, and could not hide my surprise from the excellent Don José. He, however, was born in America, and Broglio was a Lombard. Since then I have observed many like cases.

The subject that we are treating is one of the most important and the most curious ; yet it has been but little and superficially touched in passing by the authors of works on physiognomy. The great painters, the great sculptors, the great dramatic artists have known, by the intuition of genius, how to supplement the lacunæ of science ; but they have not committed to writing all that they have succeeded in drawing from the profound depths of nature. The little that we shall say on the subject will serve as germs for the studies of the future.

The expression of the same emotion may vary in *intensity*, or in *abundance of peculiarities*. An expression may be strong and very poor in forms, or, on the other hand, of slight intensity and rich in peculiarities. Sometimes, however, strength and abundance are associated, and carry the expression to its highest degree. Thus, in the savage or the man of slight intelligence, when he suffers much, or experiences much pleasure, his expression may be vivid to the point of bestiality ; but it is very little varied in form. On the contrary, a very sensitive, very intelligent,

and very cultivated man will give to his expression a delicacy of contours and richness of tints and light and shade which leaves us stupefied and filled with admiration.

The individual elements which most contribute to diversify expression are—

Age.

Sex.

Temperament.

Character.

Education.

Race.

We will study them one by one.

Age.—A baby, a child, a young man, an old man may experience the same pain or the same moral struggle. But what a difference in the expression !

The expression of a little child is especially distinguished by its extraordinary intensity and its poverty of forms. The cerebral hemispheres are feeble ; the reflex movements determine sudden contractions in the expressive muscles which are not dominated and moderated either by self-esteem, reflection, or by any of the other higher psychical energies which issue from the grey matter of the anterior lobes of the brain. Laughter and tears are equally violent, and the expression resembles that of a monkey or a negro. No penumbra, no peculiarity, nothing but a confused contraction and relaxation of the muscles. The division of psychical labour, which at this age is at its minimum, is equally important in expression as in all else.

The extreme poverty of infantile expression is especially revealed in the few gestures of the arms and of the hands which accompany and complete the expression of the face. Study in a child of three the few gestures which accompany its speech, and you will have before you the picture of a savage who accentuates badly the striking points of his discourse and the extreme degrees of his emotion. In very intelligent children the precocious

accentuation of gesture corresponds very exactly to the greater energy of thought.

Still the strength of the will is manifested from the most tender years with a great intensity of expression.

At the intermediate age between early childhood and youth the action of the cerebral hemispheres is developed little by little, and begins to subdivide and to elaborate the work of the facial muscles and that of the limbs. At this age the child already possesses the half-tints of irony, of defiance, of suspicion, and its muscles of expression, already habituated to submit to the rule of the brain, are more obedient to the will and to the moderating psychical influences of a high order.

This expression of transition persists in the permanent condition in men of lower race, and in the higher races in stupid individuals. Generally, however, the impressions of the youth are still very intense, and very meagre in shades; and under strong emotions the ill-ordered impulses of the beast who feels much and reasons little still subsist.

The young man attains perfect equilibrium between strength and richness. The play of his countenance and body presents the most beautiful and complete expressions which correspond to strong emotions, to great sensibility, and at the same time to an energetic curb furnished by the will. It is at this age that both biologist and artist should collect with jealous care the pictures of expression which are in all the plentitude of their vigour, and at the same time are rich in form and colour.

Little by little the predominance of the anterior lobes curbs and dominates the reflex movements; reason and will are fortified at the expense of sensitiveness. In the adult the expression is always weakened, mutilated, and poor, until at last in our old age we come to resemble little children. Old people weep and laugh more easily than young people and adults: in them muscular force has diminished, and the weakness of the moderating brain is

associated with uncertainty of contraction, which is more and more limited to a narrower territory of expression.

I believe that I have observed in the expression of old men an infantile character which has been little, if at all, studied. It is the persistent repetition of a gesture or an expressive movement. It seems that by this repetition they strive to supplement the intensity of expression. While the young man and the adult express the same emotion by a growing series of different expressive movements, similar to variations on a musical theme, the old man hits the same nail again and again. Repetition has always seemed to me the weakest of all the figures of rhetoric, and I found a new confirmation of my opinion in the study of expression.

I should much like to give a *résumé* of the comparative physiology of expression at different ages in a general formula. The expression of the little child is strong and poor; that of the older child is strong and fairly rich in peculiarities; that of the young man is strong, rich, and above all expansive; that of the adult is better balanced; rather richer in peculiarities than of great intensity, it becomes less and less expansive; finally, in the old man it is feeble, uncertain, and very concentric.

In this over wide formula many delicate shades of truth have of necessity disappeared, for truth is only attained by cutting things very close; but the intelligent reader will be able to give to synthesis all that is due to synthesis, and to correct by his own observations the excessive harshness of my lines. It is natural that all emotion should be diversely modified under the influence of age, and that expression should arrive at its perfection and highest degree of richness in the period of life when the emotions are strongest and most lasting.

It is thus that we find in youth the most æsthetic and the most elevated expressions of love, while the exercise of thought is accompanied by the richest and most varied

gestures in adult age, when thought and word attain their highest point of development. It would never enter into the mind of the artist to go to the old man to study the joyous expression of muscular disturbance, or to the child to study the calm melancholy of recollections.

Sex.—The expression of women is very intense, poor in peculiarities for intellectual emotions, rich for affective and painful emotions. For this latter fact I have given good reasons in my *Physiology of Pain*.¹

Feminine expression may be characterised in a word by saying that it somewhat resembles that of the child.

Other secondary modifications are due to the muscular weakness of woman, and to her predominant need to please and to seduce. Violent movements fatigue and deprive her of a part of her grace; grimaces make her ugly and pave the way for precocious wrinkles; as a result her expression will but seldom be energetic, and she will make as few grimaces as possible.

Each sex perfects certain groups of expression proper to itself: thus, while the man refines the expression of will, command, and energy, the woman pushes to its supreme point the invincible grace of the smile, and the sinuous grace of her hips. Compare the tears of a little girl who is crying to be taken to the theatre, and the tears of a woman desirous of overcoming an insensible or too ungrateful lover, unfaithful or too stingy. Both alike are weeping, and for an analogous motive; but what a difference in the means and the resources! What poverty on one side, what richness on the other! Experience, intelligence, education have taught the woman the value of the division of the work of expression; and while the little girl only screams, rolling her eyes and distorting mouth, nose, and the whole face, making herself as ugly as she can, the beautiful woman caresses you with a smile full of tears; in each smile she puts a promise of pleasure;

¹ Mantegazza, *Fisiologia del dolore*, p. 309. Firenze, 1880.

each tear is a source of pity; each throb of her muscles, each caress of her fingers, each serpentine movement of her hips, each of the beauties which she reveals to you in her movements, entwine you in the meshes of a net, and soon you will fall at her feet, bound and conquered, her prisoner and her slave. And what treason in the bursts of laughter which rise above, disappear beneath, and reappear on the sea of her tears! What wantonness in this modesty which appears to desire to rearrange that which her grief has disarranged! What arrows launched from every point of her skin, from each movement of the pupil! What a sublime genius of expression is unrolled in that little supple and graceful body to fascinate and paralyse the great body of a bearded man, who dares proclaim himself the God of the Universe, and who at this moment is the slave of feminine powers of expression!

Temperament, Character.—It has been repeated in a hundred works that nervous people have great variety of expression, while lymphatic people are but languid in this respect. Thus it happens that *genre* pictures have been drawn which are caricatures of truth. And perhaps this is necessary, for in this case truth is too complex to allow of its being confined within the frame of our definitions. For the rest, in my *Elements of Hygiene* and in other more popular works, I have often expressed my opinion on temperaments, which, though they may exist in nature, still do not allow themselves to be caught in the nets of poor fishers like ourselves.

It is indubitable that with a high degree of sensitiveness (which is the most striking characteristic of nervous people) there is nearly always a correspondingly high degree of excitability; but this is only a small part of an individual constitution. The differences between a hundred nervous or between a hundred lymphatic men are manifold.

Character represents in the psychical domain that which *temperament* and *constitution* represent in the organic; and

certainly it modifies the modes of expression much more than *temperament*.

Here I am really afraid to continue, for it seems to me that I am attempting to empty the ocean with the hollow of my hand. Size or smallness of stature suffice to diversify expression; it is enough to be thin or to be fat to give quite a different expression to the same emotion. The length of the arms in itself makes certain movements ungraceful which appear beautiful in a person whose limbs are well proportioned. Generally I have remarked that very small men are more lively and expansive in their expression; they need to compensate by the rapidity of movement the diminutiveness of their bodies. Very tall or very stout people are less expansive or more concentric in their expression, which amounts to the same thing.

Every one makes the most beautiful part of his body play the principal part in expression, and disguises the defective parts. He who has a well-formed mouth makes it a centre of expression even for emotions which ordinarily are better translated by the eyes. He who, on the contrary, has very fine eyes takes them as his organ of expression in preference to the mouth. As much might be said of the hand, the neck, the trunk, etc.

The same thing happens unconsciously in the most accentuated energies of our brains. They give to expression its tone, and impress a special character which it preserves in the most different cases. The man disposed to satire, accustomed to maliciously seek the weak or the ridiculous side of all things, divine and human, will smile ironically even in voluptuousness, even in melancholy. It is the absinthe of Sardinia which can manage to penetrate even into the honey of bees; it is the petroleum which finds its way even into ice. Thus the libertine gives a voluptuous character even to the expression of pain, of rage, or of all other emotions. The haughty have a haughty way of laughing or of weeping, of caressing or of striking;

the wicked falsify every expression, and give to it an intolerable character of falsehood and uncertainty. Such are the rules which the most superficial observation suffices to establish. We must carefully collect them to serve in the moral diagnosis which is indispensable to us every day both in the little and in the great matters of life. It is much easier to lie with the lips or the tongue than in gestures ; and I have often presumed to guess the character of a man or a woman who has gesticulated on a balcony too remote for me to be able to hear the voice.

Education.—If the diagnosis which we may attempt to form on the character of a man is often difficult and subject to error, this is no longer the case with that which has education as its object. Here we may always affirm with the greatest security, so far as we, in however humble a degree, have the habit of observing.

Before a person has spoken, we judge approximately by his manners as to the education which he has received. And manners are nothing but gestures, the expression : that is to say, the manner of walking, greeting, showing joy, pain, etc.

From the manner of expression we judge not only the quantity of education, but also its quality. Often it happens that we may conjecture that such a one must have been educated in an ecclesiastical college, in a military establishment, etc.

Generally education always acts in the same way on expression ; it moderates every exaggeration ; it diminishes the reflex and bestial part ; it affirms or strengthens the influence of the moderating centres. Thus it comes that we conceal brutal or wicked emotions, and develop those which are beautiful and good. The coarse man expresses at once all that he feels, the well-taught man only expresses with reserve ; he will not trouble the tranquillity of those who approach him, and he desires above all to show that he holds the reins in hand. For the rest, this influence

of education on expression is not always beneficial ; it has contributed in great part to give to our age this character of hypocrisy which distinguishes it in so high a degree. On another side, however, it would be still more disagreeable to find ourselves with people who deafened us with their groans each time that they experienced pain, and imparted to us their joys and astonishments by a rap of the fist or a jog of the elbow. When those who have lived among cultivated people find themselves suddenly and involuntarily among people who have received no education in expression, they are upset and feel as ill at ease as though they were in a mephitic and asphyxiating atmosphere. This discomfort does not entirely arise from exaggerated modes of expression, but this has certainly a great deal to do with it.

The influence of education above all succeeds in refining expression and imprinting thereon the most varied æsthetic characteristics. The first result of this refinement is that great effects are obtained by slight movements. Expression resembles all other mechanisms which, in proportion as they are perfected, give more useful work with less expenditure of force. The most ardent admiration may be expressed to a beautiful woman in a look or a smile, but the coarse peasant demonstrates his love to a young girl by pinches and shoves. The sentiments may be the same in both cases ; but how different the way of expressing it ! Similarly we express the most profound contempt by a simple smile, when a rustic would spit on the ground or pretend to vomit.

From the æsthetic point of view there is one expression which is beautiful, and another which is ugly. It may be amiable, graceful, seductive, or coarse, brutal, and repulsive. The dramatic artist learns to know all these different styles, and directly he appears on the stage knows how to assume the most aristocratic manners as well as the rudest and most plebeian.

Race.—Race is a very wide expression which embraces many different things, such as a certain fashion of feeling, a certain degree of intelligence, a certain intensity of emotion : all these things influence and modify expression. It is one of the most obscure points of the study of expression, and I shall devote a special chapter to it.

CHAPTER XVIII.

RACIAL AND PROFESSIONAL EXPRESSION.

As for ten years I have devoted the best part of my time and of my energy to the study of anthropology and ethnology, this chapter ought to be the least incomplete of my book. Unhappily the materials collected in travels are not very abundant, and, in addition, are scattered in hundreds and thousands of volumes so thoroughly that to collect and co-ordinate them would be the whole life-work of a laborious and indefatigable man.

Darwin himself, who treated ethnological expression better than any one else, and who formulated a catechism for the purpose of collecting all information relative to the methods of expression in different peoples, was still only able to gather together very insufficient materials in his work. I shall add thereto the little which I have been able to collect in my travels in America and in Africa and leave the question open to the researches of the future.

In this order of studies it is right to advance prudently and slowly, as with leaden feet; and it behoves us to guard against deducing a general law from a few facts. Which of us has not read and repeated a hundred times remarks on the different fashions in which the peoples of Europe express their emotions, and which of us has not deduced therefrom beautiful principles or graceful theories as to the influence of climate? And yet how many hazarded hypotheses, false laws, audacious syntheses! Here is an example:—The Scandinavians are taciturn, sober in their

movements ; they have little vivacity ; their ways of expression are full of reserve, I would say, concentric.

But go to Bergen, one of the largest towns in Norway. You will see, on the contrary, gay, noisy people, with eccentric and exuberant manners of expression. What does this mean ? It is still cold at Bergen ! Why then should expression there be quite different from that at Drontheim and at Christiania ? It is because at Bergen a number of centuries ago a large quantity of Irish slaves were imported. It is with the Celtic blood that the telegraphy of gestures, the vivacity of expression, was introduced. You have compared amongst them people dwelling in Norway but springing from different races. And who would ever dare to speak of Italian expression while it is so different at Naples and at Milan, at Cagliari and at Turin ?

The ethnological moderating influences are resolved further into other elements which we have already studied, and which are differences of intelligence, of culture, of character. If we add thereto the historical tradition which, by the effect of imitation, gives a common stamp to all men of one country, we shall have almost completed the analysis of these modifying influences on expression which we understand in the word *race*.

The mobility of the features differs extremely in different races, and does not always agree with the rank they hold in the intellectual scale. Thus, only to speak of peoples which I have seen, I have found generally a very mobile physiognomy among negroes, although by the want of division of work in the facial muscles, they contract and relax entire groups of motor bundles. But if the negroes make many grimaces, the Italians also have very mobile faces, and are yet placed at a very much higher level. On the contrary, the indigenous tribes of the Argentine Pampas (Tehuelches, Pehuelches, Ranqueles, etc.) have the most immobile faces that I have ever seen.

In the peoples of fine race, the use of different foods which are nerve stimulants contributes much to modify the mobility of the face. Thus the use of coffee, of tea, of guarana excites sensitiveness and renders expression more lively ; while the use of tobacco, of opium, of coca, and of other narcotics, renders the facial muscles immobile and gives a very apathetic character to the face.

In the same races, pastoral and agricultural peoples are less expansive in their expression, while the warlike, seafaring, or trading nations have more mobile and expressive facial muscles because their life is less simple and less contemplative. Every one knows the tranquil expression of the Oriental people, who await everything from God, and do not know the feverish activity of the Europeans.

If it were necessary to form a somewhat rough classification of the most striking ethnical expressions, I should form the following groups :—

Ferocious expression.—Tobas, Pampas, Maoris, Vitians.

Gentle expression. — Chiriguans and the Guarani in general.

Apathetic Expression.—Patagonians, Quichua, Aimara, Malays, Chinese, Japanese, Lapps.

Grotesque or Simian Expression.—The Negroes generally and the Negritoos.

Stupid Expression.—Hottentots, Boschimans, Australians.

Intelligent Expression.—Europeans.

I ask pardon for this audacious attempt which will serve to show the poverty of science in this respect. We shall be able to dilate more at our ease and with less uncertainty on several details.

In the principal lines all people of the earth agree ; everywhere men laugh and men weep ; everywhere human beings caress each other to show love ; everywhere showing the fist or putting out the tongue testifies hatred or contempt. Labillardière saw the Maoris, as a sign of joy, laugh open-throated (*à gorge déployée*) and rub

their hands. Thus Balzac laughed; it is thus that our Vogt laughs.

It is only in the details that difficulties appear. We will review them rapidly.

A king of New Zealand howled like a child because our sailors had thrown some flour on his holiday attire. Darwin saw a Fuegian who had just lost his brother utter violent cries of grief, then begin suddenly to laugh at the smallest thing which diverted him. Perhaps the English of all Europeans weep the least; they are ashamed to shed tears. A learned English lady reproached me for having made William weep in *A Day at Madeira*.

Wyatt Gill saw a young Australian woman, who was weeping the loss of her father, violently strike her breast and cheeks with clenched fists.¹ In my *Physiology of Pain* many other ethnical expressions of grief will be found.²

There seems no doubt that all inhabitants of the earth laugh, and that when they laugh in excess they shed tears. This has been confirmed in the Hindus, the Chinese, the Malays, the Dyaks of Borneo, the Australians, the Caffirs, the Abyssinians, and the Indians of South America.

Joy, unaccompanied by laughter, is also expressed everywhere in the same way. At least the enlargement and lighting up of the eye has been observed in the like circumstances in the Australians, the Hindus, the Maoris, and the Dyaks. In certain lower peoples the expression of pleasure is related to gastronomical sensations. Thus the Negroes of the Upper Nile rub their stomachs when they see some beautiful glass ware, and the Australians pretend to chew when they perceive horses, oxen, or dogs. The Greenlanders, when they speak of anything which gives them pleasure, breathe in the air with a peculiar noise, as though they were swallowing a tit-bit. We, who belong to a higher race, and who laugh at this lower expression, can-

¹ Wyatt Gill, *Life in the Southern Isles*. London.

² Mantegazza, *Fisiologia del dolore*, p. 316.

not however deny that sometimes at the sight of a beautiful woman we make a face as though tasting something exquisite.

Labillardière's Australians testified their joy by laughing, putting their hands to their heads, and stamping.

The aborigines of the Friendly Isles cry *eho! eho!* to express agreeable surprise.

The islanders of Amboyna, when chatting with Labillardière, became wonderfully animated when they spoke of a young woman—that is, a *paranpouang mouda*; and they made horrible grimaces which distorted their whole faces when they had to speak of a *paranpouang tonā*—that is, of an old woman.

Darwin assures us that kissing is unknown among the Fuegians, Maoris, Taïtians, Papuans, Australians, the Somalis of Africa, and the Esquimaux; but Wyatt Gill saw the Papuans at Port Moresby kiss, embrace, and scratch each other with their fingers to signify affection to one another.

Labillardière put out his hand to an Australian; the latter gave his in return, smiling and bowing, and at the same time he raised his left foot and carried it backwards in proportion as his body bent forward.¹

Labillardière saw the aborigines of the Friendly Isles kiss each other with the tip of the nose; he adds that it is doubtless therefore that they have flattened tips to their noses (?). Their women demanded presents with a winning smile, bending their heads and placing their hands on their breasts. These women bowed low before Queen Tiné, put their heads under her right foot, and touched the sole with their right hands.

In Polynesia greetings are nearly always very courteous and accompanied by poetical speeches. Thus at Tahiti and at Rarotonga they said: *May you live with God!*

¹ Labillardière, *Relation du voyage à la recherche de La Pérouse, etc.*, tom. ii., p. 29, année viii. Paris.

At Mangaia: *Brother*; at Samoa: *Love to you*; and in saying farewell: *May you sleep*; and that at any time in the day, because for these people to sleep is the ideal of happiness.

Nose-kissing is met with among almost all Malays. It seems that the Annamites add thereto a sort of neighing.

In the country of the Mittos, directly Schweinfurth entered, a *scribe* the *fresh cup* (sorghum bread with cold water) was brought to him, and his feet were washed; then came the visitors bringing butter, milk, honey, *merissa*, etc.

The Nyam-Nyams greet each other politely, and when they want to make their salutations more courteous, or to inspire confidence, they say: *Badya, badya, muia*; my friend, my dear friend, come here. They put out their right hands and so join them that the two middle fingers meet, and when they shake both hands they do it with a singular movement, which in us would be a sign of aversion. The women are never greeted in public except by their most intimate acquaintances.

When a Negrito of Luzon is in a wood and wishes to eat, he may not begin his meal before having invited aloud and several times all those who are within sound of his voice to come and partake of his repast. He who fails in this practice is severely punished, and sometimes even put to death.

The expression employed by men and women to signify in turn their amorous desires is very cosmopolitan in form; neither sex will ever have been deprived of love for want of having been able to understand the expression of a desire. The nymph of the Latin poet fled towards the willows; the young New Caledonian women of Labillardière, despoiling themselves of the only veil which covered them, ingenuously showed themselves to the French sailors. These two expressions are very different; the one full of shamefacedness and coquetry, the other shameless and frank, but both lead to the same end.

Hatred, rage, contempt are expressed almost in the same way in every country in the world. Darwin shows this by examples taken from different races. Thus the aborigines of the Admiralty Islands express rage by raising the upper lip in such a way as to show their clenched teeth, wrinkling their eyebrows, putting down their heads, and turning towards the object exciting their rage. Another inhabitant of the island had all the muscles of the face, and especially those of the eye, seized with convulsive movements. And that picture might also be applied to ourselves. The Monbuttoos express astonishment by opening the mouth out of all proportion and covering it with the open hand. It seems that the aborigines of North America have the same way of expressing surprise.

If from these very remote races we pass to the European peoples whom we know better, we shall also find notable differences in the way of expressing the same emotion. In this respect we might find the first attempts at an ethnical physiognomy even in the old writers; but all have confounded features with expression, immutable anatomical characters with variable movements. We will give a few examples into which many purely psychical characters enter.

Ghiradelli devotes the last chapter of the work which we have already quoted to the *Universal knowledge of different nations or provinces*. Here are a few passages from the four small pages which he gives to so important a subject—

“Just as regions and countries differ from each other, so the manners of the inhabitants are dissimilar. The Egyptians are cunning, docile, light, avaricious, and inclined to the pleasures of love. The people of Thracia are unjust, idle, and cowardly. Those of Scythia (according to the reports of Maternus) are cruel. The nations of Transalpine Gaul indocile, courageous, and proud. The Italians are famous and illustrious for their descent from the Romans. The French . . . and the Greek are light, the Syrians avaricious, the Asiatics given to Venus and

always occupied with pleasure, the Sicilians very subtle, the Babylonians prudent.

"In Lusitania (as Portugal is called) men are born melancholy, sanguine, and robust, but of slow and hard intelligence.

"The Sicilians are passionate and melancholy, well made in body, courageous ; they are often practised in fighting, they leap and dance very agilely, and become very nimble. Italy most often gives birth to weak men, although a few (by exception) may be very robust ; they are distinguished rather by imitation than by invention,¹ they are of middling stature and rather thin.

"In Germany men are phlegmatic, choleric, corpulent, imbecile (!!), and very little apt in difficult enterprises, although very ingenious in their manual works. The French have a phlegmatic and choleric temperament ; they are for the most part weak ; and if some are brave (!!) and strong, they make a bad use of their courage and their strength.

"According to the nature of the celestial signs we may conjecture the temperament of those subjected to their influence. Thus Narbonese Gaul is placed exactly under the sign of the Ram and under Mars, and its inhabitants are generally ferocious, insolent, and cruel. But Italy, Puglia, Lombardy, Sicily are placed under the sign of the Lion and under the Sun, and the people who dwell there have a taste for horrors, grandeur, magnanimity, and amity. The Tuscans, the Transalpine Gauls, and the Spanish are placed under the sign of Sagittarius and under Jupiter : thus they are friends of liberty, of justice, and politeness. . . ."

All this is coarse psychology and astrology, but not comparative expression. The conclusion of these insensate vagaries is worthy of the premises—

¹ It seems impossible that an Italian could write so great a heresy.

"Let us then conclude that temperaments and manners of men depend in great part on the nature of the country and the planets, and by the signs to which they are subject. . . ."

Lavater, coming a century later, and endowed with a wider and more scientific mind, found himself face to face with this great problem of national physiognomies, and devoted thereto many pages and many plates, always confounding anatomy and expression.

"If nations differ in their moral character, they must differ still more in their physiognomy. The fact is real, and to doubt it one must never have seen men of different nations; one must never have approached the frontiers of two peoples. . . .

"All that I have written on this subject, and all that I shall say of it, is nothing in comparison with the interesting discussions which it may furnish. It is enough for me to show that it deserves to be treated in a special work, which should be worthy to occupy the attention of our Academies, and to exercise the liberalities of princes.

"The natural history of natural physiognomies is a study worthy of occupying man and the philosopher, the mind inclined to action and the purely speculative. It is one of the first and the principal bases of physiognomy, and, I repeat, to deny that there are national physiognomies and characters is to deny that it is day at full noon."

That may be called putting the problem and foreseeing the future solutions; but when Lavater would descend to details he only draws uncertain and confused lines. If all in these observations on national physiognomies that relates to the features is suppressed, here we have the meagre harvest which remains to us.

In speaking of the French, he says they are above all distinguished by their teeth and way of laughing.

The Swiss have no national or generic physiognomical character, except the frankness of their look.

As he confesses to having travelled little, he borrows observations, edited or not, from several scholars. There too what uncertainty!

"Rapid elocution, the way of acting brusquely and precipitately, of which the Jews give proof on every occasion, distinguish them from other peoples."—LENTZ.

"I have not only observed the differences of national physiognomies, but I have had the opportunity to convince myself by innumerable experiments that the principal form of the whole body, its general attitude, an embarrassed or negligent movement of the head, a firm or uncertain, rapid or slow step often offers more infallible characteristics perhaps than the face alone. The man studied from a condition of perfect repose to the highest degree of rage, of fright, or of grief, would be so easy to recognise that one might distinguish Hungarian, Slave, Illyrian, and Wallachian only by the attitude of the body, the movements of the head, and the gestures. In consequence the same signs would serve to fix our ideas on the positive and invariable character of such and such a nation."—FUESLIN.

There are some very subtle observations in a writer of Darmstadt, whose name unfortunately Lavater has not given us. Here are some—

"The Englishman walks upright, and when he is standing he maintains a stiff immobility . . . when he is silent and inactive his physiognomy gives no indication of the mind and intelligence which he possesses in so high a degree. His eye says nothing, and does not seek to please.

"The Frenchman . . . walks in a dancing way. His open face announces at once a thousand agreeable and amiable things. He does not know how to hold his tongue, and when his mouth is closed his eyes and the muscles of his face continue to speak.

"Sometimes the eloquence of his exterior becomes astounding, but his natural goodness covers all his faults. Although his face is peculiar, it is difficult to describe it. No nation has less marked features and at the same time so great mobility. The Frenchman expresses all that he will by his face and gestures : thus he is recognised at the first glance and can hide nothing. . . ."

The portrait which this good citizen of Darmstadt draws of the Italian is too amusing for me to resist the temptation of giving it entire—

"The physiognomy of the Italian is all soul. His language is a continual exclamation and gesticulation. Nothing nobler than his exterior ; his country is the home of beauty. A small forehead, the bones of the cheeks very pronounced, an energetic nose and an elegant mouth, attest his relationship with the ancient Greek. The fire of his glance proves in what degree the development of intellectual faculties depends on the influence of a happy climate. His imagination is always awake, always in sympathy with the objects which surround him. His mind is a reflex of all creation. See with what superiority Ariosto has run through every domain. A poem like his is, in my mind, the prototype of genius.

"Finally, in the Italian all is poetry, music, and song, and the sublimities of art belong to him of right. It is true that at a recent epoch the political and religious system may have given an evil twist to the national character ; but it is the populace only which deserves the reproach of perfidy. In all other classes of the population the most honest and generous feelings are found."

Artists would do well to study Chodowiecki's table in Lavater's work, where they will find twenty-eight national types represented on a small scale with their characteristic gestures and features.

But if, after having met with so many clouds in the past, we would seek a more breathable air and describe

correct types capable of resisting scientific criticism, we find ourselves very embarrassed.

Each of us, in the narrow circle of his own experience, knows by having observed it how expression differs in the French, English, and Spanish. But it is another thing, and much more difficult, to define and to describe these differences.

We will limit ourselves to a few words, hoping at least in this way to commit fewer errors.

The expression of different peoples is above all impregnated with their most prominent psychical characters.

The culture and ardent love of the beautiful are virtues which belong to us Italians; our shame is to have been constrained to obey for centuries petty laic tyrants and great tonsured tyrants. It is because of this that our expression, while it is beautiful and impassioned, yet remains defiant and not always frank.

Each province of Italy has a particular manner of expressing emotion. While the Milanese laugh readily and loud, and in this resemble the Celts, the inhabitant of Cagliari is extremely serious, because he has been largely subject to Spanish influence. The Tuscan is the most Italian of all Italians, and in consequence the most defiant and reserved of all; the Neapolitan makes telegraphic gestures with his arms; the Romagnol is rough and frank; and the Roman, worthy in his statuesque movements, always retains the fatidic letters S, P, Q, R, inscribed in invisible characters.

The expression of the Frenchman is concentric, rapid, and gay; that of the Englishman haughty and stern; that of the German heavy, benevolent, and always ungraceful. The Spaniard and Portuguese gesticulate little; their faces remain impassive, perhaps rather in consequence of Asiatic influences, but especially that the dignity of the *Hidalgo* may not be compromised. Many Slave peoples do not look one readily in the face, and have a

very false expression ; the Jews in all Europe have an embarrassed and timid expression ; in each of their movements they seem to ask pardon for being in the world ; they always seem ready to take to flight—like cats, who, consulting with disturbed eyes, look under which door or over which wall they will be able to escape. The fault is not in the Jewish race, but in us who have persecuted them for so many centuries with a piety so evangelic. The expression of the Scandinavian is hard and without grace, as I described it in my book on Lapland.¹

In a general way, and taking things in the gross, it may be said that in Europe we have an expansive and a concentric expression. The first is found in the Italians, the French, the Slaves, the Russians ; the second in the Germans, the Scandinavians, the Spanish. We might also say that there is a beautiful expression full of grace, that of the people of Græco-Latin origin ; and another hard, quite angular, without roundness, that of the Germans, the English, and the Scandinavians.

I will now say a few words on the expression peculiar to certain professions. It is certain that often on seeing a stranger we exclaim to ourselves—*This man must be a pharmacist ! I bet that this is a priest or a disguised soldier ! This other can only be a carpenter !* And many times these hazarded suppositions have been correct.

If in these opinions, or to say better, in these conjectures, we abstract all that depends on the mode of dressing and of speaking, all the rest belongs to expression. The profession has then a modifying influence on the expression of the face, and even on the character, on the health, and many other inner and outer things which relate to the *ego*.

The professions which most profoundly modify expression are those which daily exact a particular mode of muscular movement or of brain work. It is because of this that I recognise the druggist, the pharmacist, the carpenter, the

¹ Mantegazza, *Viaggio in Lapponia*. Milan, 1880.

priest, and the soldier more readily than other members of society.

The habit of always remaining seated behind a desk, or making up little packets, gives a very striking character to the gestures of a druggist, which is found almost the same in the pharmacist, but associated with the gravity of the magician who reigns over prejudices, fears, and mysteries. The doctor himself often recalls the pharmacist, for the same reason; but in him there is further the stereotyped seriousness of the man who neither can nor will laugh in the midst of the suffering which he has constantly before his eyes.

It would be more difficult for me to say why I often succeed in recognising a carpenter in the midst of all the other workmen who fashion and transform matter. I believe, however, that I may explain it by saying that the habit of planing, piercing, sawing, drawing lines, of seeking symmetry in the woods, gives a peculiar character to the muscles of the face which becomes permanent.

The priest and the soldier belong to distinct social castes; they wear uniforms and visible signs which impregnate their very skins, their muscles, their whole being. The gesture of the soldier is always precise, rigid, energetic; that of the priest, supple and unctuous, seems to glide into the celestial spheres inhabited by cherubim. The soldier, even in mufti, has in all his gestures the attitude of obedience or command. The priest, even in lay attire, retains the mark of the cassock and band: his fingers always seem to bless or absolve; his lips are constantly occupied in murmuring the service; he is continually adoring, and seems ever to smell the heavenly incense or of terrestrial Tartuffism. My friend, Dr. Emmanuele Malfatti, pretends that he can always recognise a priest by his lower lip, always prominent, and sometimes falling, by the habit of wetting the finger to turn over more rapidly the pages of his breviary.

Similarly, the sailor, the horseman, and the dancer are easily recognised in the midst of other men. It is easy to understand that this depends on their peculiar habits of using their legs. The habit of riding suffices to give a national character to the Hungarians, the Arabs, and to the population of the Argentine Republic.

Clockmakers, bankers, notaries, advocates, have gestures peculiar to themselves. But there the diagnosis becomes more uncertain and more difficult. Many witty pages might be written on this subject; amusing caricatures of each profession might be drawn; but science would derive therefrom few materials for the building up of a serious and positive construction.

CHAPTER XIX.

THE MODERATORS AND DISTURBERS OF EXPRESSION.

EXPRESSION is the effect of a centrifugal current emanating from the brain and spinal cord. If certain contractions or certain relaxations of the muscles always corresponded to the same emotion and the same psychical phenomenon, it would be very easy to interpret the expression value of each movement, since experience would have furnished the necessary data for putting the equation. And we could not only recognise the meaning of the expression, but also measure the degree of the energy which provokes it. Unhappily the problem does not admit of being put in these terms, it is much more complicated. At least, where an emotion tends to be expressed in a certain way, by means of a certain group of the muscles of the face, of the trunk, or of the limbs, often a disturbing or a modifying cause intervenes, and the final result for the same emotion may be entirely changed. Thus we may maintain that in expression simple emotions are most rare, and that generally we have before us a resultant of different and opposite forces in equilibrium and mutually modifying each other. It is here that we have the principal objection raised against physiognomy, considered as interpreting the inner man, and this it is that inspired Lavater to his *First Fragment—The Despised Pretensions of the Physiognomist*.¹ But, a century ago, he had not at his disposal an experimental science, refined, exacting, inexorable, which would have allowed him to answer his adversaries with more solid arms, penetrating to the bottom of things. In addition to this

¹ Lavater, *op. cit.*, tom. ii. p. 1.

difficulty, which came to him from the epoch in which he lived, his sensitive nature made him rapidly run over the surface of things, that he might feel the warmth of the feeling exhaled by them.

"Thus we agree that the Physiognomist is sometimes deceived; but we shall always maintain that his errors only show the limits of his penetration, and in no way prove that the science which he makes his object is a lying science. To conclude from the contempt of the Physiognomist that in general Physiognomy deserves no confidence, is as though one maintained reason is a chimera, because it may happen to any reasonable man that he acts in a way contrary to reason."

Lavater and the other less celebrated physiognomists have almost entirely concerned themselves with dissimulation as a disturbing cause of our judgments, while there are many other disturbing elements beyond that. And as on the other side they have always confounded anatomy with expression, the immutable with the variable, they could only weakly defend themselves against their adversaries.

The complex effects of expression may be studied in the most intelligent animals and in those nearest to ourselves. A dog has been well chastised several times for having jumped on a table and taken the meat he found there. A tempting morsel is offered to him on a plate and the plate put before him. It seems that the dog ought to express the very simple feeling of alimentary desire and pleasure; but at the same time he remembers the severe corrections he has received. While he contemplates the meat and shakes his tail, he examines you with an inquiring and suspicious air, and from time to time all expression ceases, and he looks into the air as though profoundly disturbed and preoccupied. This picture is a living representation of the expression of pleasure troubled by fear. It is by no means the only one which the observation of animals offers us. I appeal to hunters

who may have seen hundreds of others, and to all those who, possessing an intelligent cat at home, have a thousand opportunities of studying the hypocritical allurements of this domestic tiger.

In man, it is always will which troubles and modifies the simple and ingenuous expression. But will may in turn be shaken by a psychical *x* of variable nature.

Here are some examples.

Modesty, especially in woman, who feels it more than man, may modify or even entirely hide the expression of voluptuousness, offering us pictures in which pleasure now triumphs and upsets all the moderating obstacles which oppose her will, now modestly hides under the veil of a noble hypocrisy. At other times, on the contrary, the desire of deceiving or of pleasing the companion of our pleasures may reach the point of simulating more or less skilfully a voluptuousness which is not felt at all.

At other times, it is courage, or self-love, which interferes to moderate the expression of suffering; and a forced smile shines on a face spasmically contracted, or a willed immobility puts a curb on the most violent and irresistibly muscular contractions. On this point I refer the reader to my *Physiology of Pain*, in which I devoted a whole chapter to the study of some disturbing causes in expressions of pain. To complete the sketch, I may be permitted to recall the most important of my conclusions. The most striking characters of false expressions of pain are the following :—

1. The expression is almost always exaggerated and out of proportion with the causes of pain.
2. The face is not at all pale, and muscular disturbance intermittent.
3. The skin preserves its normal colour.
4. There is no harmony in the expression, and certain muscular contractions and relaxations are seen which are always wanting in true pain.

5. The pulse is rapid, because of the exaggerated muscular effort.

6. An unforeseen surprise or any object which attracts attention is enough to cause all the expression of pain to suddenly disappear.

7. Sometimes one succeeds in discovering, through the deepest sobs and groans, the fugitive gleam of a smile, in which perhaps the malicious joy of deceiving one's neighbour is betrayed.

8. The expression is nearly always excentric and absolutely wanting in concentric forms.

This analytical study suggests to us a method for the discovery and description of all other hypocritical expressions. False pleasure, for example, is expressed by a forced laugh, by deep sighs prolonged beyond time and measure. False rage is manifested by exaggerated movements of the limbs and by a forced contraction of the eyebrows, while the lip smiles involuntarily and the eye looks another way.

False expressions may be reduced to two types—

Exaggeration of a weak emotion, or simulation of an emotion which does not exist.

Attenuation of an expression, or even its complete dissimulation.

When we exaggerate expression, we nearly always push this exaggeration beyond the probable; this gymnastic of hypocrisy fatigues us; we often rest, and at intervals we frequently substitute, without perceiving it, a diametrically opposed expression for the part we will to play.

Thus I have seen a woman who had just received a large inheritance from her brother burst into laughter, while she was striking her head against the wall, and pretending to be inconsolable. Similarly, when a religious feeling is simulated, admiration or compassion, it often happens that there is a cynical or sardonic smile, or the tongue is put out in a grotesque manner.

Exaggeration of expression, disorder of movements, marked interruptions, these are the most striking characters of an expression which would denote that which is not felt, or make pretence of an emotion which is not experienced at all. There is, however, another character, still more constant, which because of its extreme slightness has escaped many ordinary observers.

Of all the muscles, those of the trunk are the most amenable to the will, those of the face are less obedient, and those of the eyes the most independent of all. That is why, in a lying expression, so many movements are made with arms and legs, so many contractions of the muscles of the face ; while the eye courageously resists, or at least is the last to lend itself to these lies. We see a hurricane in miniature, a tempest of convulsions ; but the eye remains immobile and apathetic, and suffices to reveal the secret of the comedy. Tears flow very rarely in feigned emotions. Some women only, truly geniuses of falsehood, succeed in shedding true tears without feeling any grief. In the ordinary condition, the lachrymal glands are not obedient to the will ; but after a long exercise it may be possible to overcome and to discipline them, and they allow of the flow of their precious legion when this suits the arrant Tartuffe who desires to dupe others.

One may be a great artist in hypocrisy, may have been practised since childhood to express that which is not felt, and have acquired a talent of the first order in this sort, still there is always the fear of not succeeding at will, because the difference which exists between the inner feeling and the comedy which is being played is felt. Thence comes the irresistible tendency to exaggeration, the belief that expression is insufficient, and the need felt to supplement it by cries or words. Great pains are nearly always silent, or at least only accompanied by those vital phenomena which we call automatic, such as sighs and groans ; on the contrary, feigned emotions

are often eloquent, and accompanied by great outbursts of loquacity.

Inversely, when for any end we attempt to dissimulate an emotion, we give ourselves up to work quite opposite to the preceding. Before all, we attempt to restrict the domain of expression, and naturally we begin with the muscles which most quickly and most easily obey our will. The movements of the legs, arms, trunk, and neck are stayed. If the moderating force is increased, the field of expression is more and more narrowed, and even the muscles of the mouth and cheeks are stopped, until finally expression is reduced to this last territory which in every age, and in every language, has been called, and not without reason, the mirror of the soul.

It is in the eye that the last battle is fought : this is the last fortress where expression concentrates all its forces, and often remains victorious, even after having abandoned every other province. The vulgar, who judge by the appearance of things, say that the emotion has disappeared, or has never existed, because they see the limbs and the body immobile, and the face impassive ; but the more profound observer finds concentrated in the eye all the forces which were previously scattered over a vast space, and judges rightly that the emotion is very strong, but that it has shut itself up entirely in a very narrow citadel.

Sometimes, by force of hypocrisy or heroism (for in the physiology of the phenomenon no account can be taken of the moral side), all the expressive muscles of the body and the limbs have been successfully stilled ; but a contrary expression has been substituted. We are overwhelmed with bitterness and humiliation, and yet we laugh and joyously shake our fingers, neck, or feet. Our whole body expresses contentment : the eye is silent, and resists this avalanche of falsehoods. All at once two big tears roll down the cheeks, and reveal the secret of the painful battle which is waging. The great painters, and the great

dramatic artists, know how to express these hidden beauties ; but we, who are neither painters nor comedians, should study these troubles of expression to profit by them in life.

More than once, while children have appeared profoundly absorbed in study, I have discovered that they were giving themselves up to their vicious habits by examining their eyes, which alone betrayed what the whole remainder of the body succeeded in hiding.

The vasomotor nerves also are little or not at all obedient to the will ; thus it is right to pay great attention to the sudden flushing or paling of the face, because it is often the involuntary sign of an emotion of which not the least trace could be discovered in all the rest of the territory of expression, not even in the eye.

In the midst of an animated conversation, in a theatre or in a ball-room, should the preferred man be suddenly brought in, ninety times in a hundred the loved woman blushes suddenly ; or even more rarely she grows pale. No mark of surprise, no smile, no movement has greeted this arrival beyond the eye, which has perhaps closed, or the eyelid, which has fallen to hide the sudden gleam from the mirror of the soul ; but the vasomotor nerves have had to yield to the emotion, and have caused the face to blush or to turn pale.

If when her lover enters the room the beloved neither changes colour nor lowers her eyelids, either she does not love, or she has attained a perfection of hypocrisy which may give reason for doubting whether a heart still beats within her breast.

Men of strong will, and women who have carried the gymnastics of simulation very far, after having driven expression into its last fortress, the eye, might succeed in triumphing even over this last entrenchment, so that nothing shall now give any outer sign of the internal flame. Then, when all the valves of expression are thus closed, it nearly always happens that a limb (a leg, an arm,

a finger) is suddenly taken with a rhythmical convulsion, and begins to beat time regularly. Generally the finger taps on a solid body so as to make a noise, or the foot beats the ground. Less often the breathing is gasping and stifled, even passing into hissing.

These facts are frequently verified when there is an attempt to hide rage. This rage is so much the stronger the more frequent the rhythmic tapping becomes substituted for the ordinary explosive expression, and as this tapping is accompanied by laboured breathing. It seems that in this case there is not only, in a figurative sense, a boiler full of steam, the valves of which are closed and threaten to burst, but there is actually a captive force escaping from its prison with a fury and a violence more redoubtable the narrower the passage which it finds.

In all these cases of feigning and dissimulation there is always an unfolding of muscular force, or at most of phenomena of secretion which are associated with it, as that of shedding tears. But there are other more complete and obscure transformations in which the purely expressive fact passes into the highest psychical regions. We will not penetrate into a realm beyond the field which we have undertaken to treat in this volume, but we must examine how these phenomena are related to expression.

Often enough the effort made to dissimulate an emotion is so great that if it lasted it would induce serious troubles in the nervous centres. The force of expression which cannot find an exit in the muscular field then throws itself into the regions of thought, and arouses there new and powerful manifestations.

A man enters a room. A woman whom he loves shows no emotion; but, from being very silent, she suddenly becomes very talkative; or, if she had been speaking indifferently, she begins to talk with enthusiasm; the sound of her voice modifies, and may even become musical. More frequently she forgets the subject of conversation, and, by a strange

and bizarre association of ideas, she begins to run over a hundred things which have no relation either to those of which they were talking or to their surroundings. Unexpected caresses for a child whom she had previously not noticed, sudden enthusiasm for a picture which she had not remarked, or for a piece of furniture which she had seen a hundred times without paying attention to it: such are the very precious and grave signs which tell us that the emotion is very strong, and, not being able to pour itself out in natural expression, has invaded the field of thought and feeling, to suddenly arouse there an unwonted and confused activity.

CHAPTER XX.

CRITERIA FOR THE DETERMINATION OF THE STRENGTH OF AN EMOTION BY THE DEGREE OF THE EXPRESSION.

AN almost immobile face scarcely expresses anything ; a very mobile face may express a great emotion ; an entirely immobile face may express an emotion carried to its highest point.

"I did not weep : within I grew to stone."

A verse that all remember, and which shows that our great poet was also a profound observer. It proves at the same time how difficult it is to measure the intensity of an emotion by the exact degree of the expression. It is too true that in expression also extremes meet, and that cynical laughter may accompany poignant suffering just as tears may be the sign of a very great joy.

Probing deeper, we recognise that the confusion is less than it seemed at first. The face rendered immobile by excess of emotion is in a state of tetanic contraction, while the face without expression or the indifferent face have the muscles in a state of semi-repose, which permits of no want of equilibrium either between the elevators and depressors of the lip and of the jaw, or between the muscles which direct the eyeball to such or such a point of the horizon. The indifferent face presents general immobility, but not spasmoidic, without any characteristic relaxation, and without any special contraction.

The omnibus is one of the best places to observe examples of these indifferent or neutral faces ; but we must at once

add that it is very rare to meet any perfectly indifferent. The least degree of attention, of weariness, of pleasure, or of suffering, the simple recollection of a pleasant word or of a painful scene, suffices to give more brilliancy to the eye, to raise or depress a corner of the mouth, and to thus bring about a slight expression on the face. An absolutely negative expression on the face of a man who is not asleep is so rare that even on canvas or in marble, in portraits which have not been made with the view of expressing a passion, we inevitably seek a sign which reveals a thought, a character, a shadow of a psychical act. And most frequently this sign exists because the frequent repetition of a same expression draws or sculptures it in ; and if the artist is not a simple modeller or a photographer of noses and ears, he must have represented that part of the face which belongs to expression. This is so true that on looking at a portrait we always look for this expression ; if we do not find it, and if we cannot say that this face is intelligent, or inspired, or lascivious, or bad, or joyous, we say it is a stupid face, which for us is pretty well synonymous with a perfectly apathetic and expressionless face.

One of my dearest friends is very little inclined to be expansive, and his expression consequently is one of the least expressive that I know ; but when he reads or hears anything which causes him a certain surprise he elongates his trunk vertically (whether he is sitting or standing), and by this simple movement expresses his emotion and astonishment.

From complete apathy, which represents zero, we pass successively to the highest degree of voluptuousness, despair, rage, love.

Independently of the nature of the sentiment which moves us, the intensity of the emotion is measured in the following ways :—

1. By the force of the contraction of the expressive muscles

2. By the persistency of their contractions.
3. By the diffusion of the movements in expressive circles of increasing size.
4. By the rapidity of the alternating contractions and relaxations.

Every day we measure the intensity of the emotion by the force of the contraction.

The act of pressing the jaws together is one of the most certain signs of rage; but there is a gradual passage from the simple shutting of the mouth to the gnashing of the teeth, and finally to spasmodic contraction, such as I have seen in a woman in an access of jealousy.

The persistence of an expressive act is a less certain sign, for the strongest emotions are of short duration. Generally, however, when there is a very strong but not excessive emotion, the persistency of the expression indicates the intensity of the psychical act with which it is associated. Tears which are of long duration generally come with long pains, *ceteris paribus*, and prolonged laughter scarcely suffices to discharge the strong tension produced in us by a very comical or very ridiculous scene.

The diffusion of expression in gradually increasing circles gives perhaps a more exact measure of the intensity of emotion. At first the expressive picture is limited to a small number of muscles, then the expression extends to more and more distant muscles, and finally invades all.

That which occurs in such cases recalls the centrifugal circles produced by the fall of a stone on the surface of a lake.

This progressive diffusion of expression may be studied in the smile, which at first scarcely causes the contraction of the elevator of the upper lip, which afterwards changes into a laugh in which all the muscles of the face, and in addition the diaphragm and the respiratory muscles of the thorax and of the neck, participate; when laughter becomes immoderate and excessive, the arms, legs, and muscles of

the trunk enter into the movement, and at last the emotion breaking through the frontiers of the cerebro-spinal world, seems to invade those of the great sympathetic, and leads to the involuntary evacuation of urine and intestinal gases.

The diffusion of the circles of expression follows certain laws of contiguity and sympathy. As to the face, the diffusion seems to proceed by the simple contiguity of the muscles to which the contiguity of the excito-motor centres necessarily corresponds. After the face the neck comes, which often moves, then the arms, then the trunk, and finally the legs.

Generally, the upper limb is more expressive than the lower, and the movements of the arms and the hands accompany the increasing intensity of word and of will. In many cases, however, the sympathetic communication between the expressive circles proceeds rather according to the harmony of functions than according to the contiguity of expressive muscles. Thus it may happen that a lascivious expression of face, when the emotion becomes more intense, agitates by sympathy the muscles of the pelvis and of the lower limbs before those of the arms, although these are more expressive.

The arm and hand are the true instruments of expression; they perfect, refine, and complete the action of the face. A caress, or the joining of the hands in adoration, corresponds to the kiss which the lips have just impressed. The interlacing of the fingers is associated with the wide-opened mouth and the eyes dilated with stupor. To lips clenched in anger is added a closed fist, and an arm raised to heaven, and so forth.

However diverse the functions of the muscles of the face, the trunk, and the limbs, the general character of the expressive form is always preserved in the diffusion of the expression through different legions of muscle. Thus sudden and irresistible joy causes the opening of the arms, then of the legs, after having produced movements on

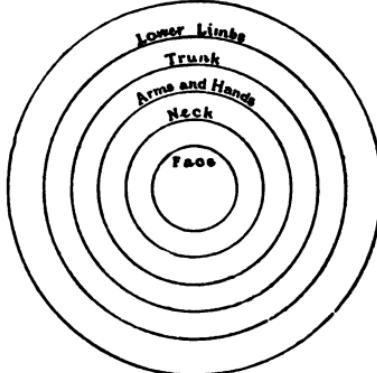
the face, all of which are centrifugal. On the contrary, a violent pain, after making all the muscles of the face converge in a centripetal direction, tends to bring the arms and lower limbs towards the medium line of the body. This is because the expression of pleasure is always centrifugal, and that of pain always centripetal.

The diffusion of the expressive field in proportion to the growing intensity of an emotion is one of the fundamental laws which regulate the propagation of the movement, and it must be based on a very simple phenomenon of elementary physics. A small number of nerves and of muscles do not suffice for the diffusion and transformation of a given quantity of the psychical movement. After having exhausted the resources of the cerebro-spinal system and those of the great sympathetic, it seems at times that the action tends to propagate itself beyond ourselves in such a way that we carry away in sympathy with our movement external objects whether animate or inanimate. How often has not a man, drunk with joy, having brought all the muscles of his body to a supreme degree of tension, made the chairs and tables of his room dance, and his friends too, if any were within reach! At other times the same objects which are to hand become so many projectiles which we fling away with great centrifugal force in an access of pain or hatred.

The annexed schematic figure diagrammatically represents the diffusion of circles of expansion, as occurs in most cases; it extends from the face to the neck, the arm, the trunk, to the lower limbs, and finally to unconscious regions of the great sympathetic.

One last criterion, very important for the measuring of the intensity of an emotion, is that furnished by the rapid alternations of muscular contraction and relaxation. Here the intensity of the central movement which accompanies the emotion finds a means, thanks to change, of discharging itself to the profit of the nervous centres. It is especially

in pain that this alternation may be observed ; tears are succeeded by sobs, groans, cries, sighs, palpitations, and all these phenomena may follow in different order. Also spasmodic and suffocating laughter may alternate with lamentations and convulsions of diverse forms.



When the four elements which we have studied separately are united and associated, we have in a single scene of expression all the proofs of great intensity of emotion. In fact, strong contractions, lasting contractions, a great diffusion of expressive phenomena, and an alternation of different pictures may occur.

In extreme degrees of emotion neither of these conditions by itself, nor all four together or successively, suffice to complete the picture. Then we have before us the paralytic form which arises from the exhaustion of nerve centres and from the fatigue of expressive muscles. Immobility may then be absolute or nearly absolute. It is no longer the tetanic immobility of him who "within has grown to stone," but the immobility of apparent death. At most some characteristics of the emotion which has reduced us to this extremity continue. The cry, *I am dying!* may be the expression of extreme pleasure as much as of extreme suffering ; syncope may be the last effect of ferocious rage, as of mad envy or of deceived ambition. The keen observer may always, in these cases, discern the cause of

the supreme catastrophe of expression, and great artists know well how to represent in a very different manner Francesca at the moment when, in the arms of Paolo, she ceases to read in the fatal book, and the Christian martyr who faints with terror before the axe of her executioner.

CHAPTER XXI.

THE FIVE VERDICTS ON THE HUMAN FACE

THE PHYSIOLOGICAL VERDICT.—THE GOOD AND EVIL MIEN.—
PATHOLOGICAL PHYSIOGNOMY.

THE human face is such a field of observation for us that from our childhood we consider it as the most important object in all the animated world which surrounds us. The most primitive savage, the likest to the ape, being after all a social animal, may be said to feel the need of looking another savage in the face to read there threatening or love, desire or grief. Our children, from the tenderest years, before having received any education, very soon acquire enough experience to interpret the expressive language of a human face; in this they have a singular perspicacity, and know how to guess our desires, our ill-humour, our suspicions, before we have expressed them by word. This experience grows from year to year, and ends by constituting in each of us a certain physiognomical patrimony which, from the unconscious interpretation of the most automatic facts, rises by degrees to the examination of the most machiavellian of wrinkles, smiles, and tears. There we have the raw harvest whence science must extract the few ripe and wholesome grains and separate them from all the straw of hazardous guesswork and conjecture, and from all this obscure instinct which has a presentiment of the truth without being able to translate it into the clear and precise form of language.

As for ourselves, after looking at a human face, we might not be able to say the colour of the eyes, the form of the chin, or the length of the nose, but we could nearly

always formulate certain judgments relating to one of the five great problems which a human face presents.

1. Condition of health or of sickness.
2. Degree of beauty or of ugliness.
3. Moral worth.
4. Intellectual worth.
5. Race.

These five problems conduct to five different opinions which we can form on the face of a man, and which I shall call—

1. Physiological judgment.
2. Æsthetic "
3. Moral "
4. Intellectual "
5. Ethnic "

When I have had the happiness of counting among my pupils some young intelligent people who followed the course of philology and philosophy at the Institute of Florence, I strove to quicken in them the spirit of observation which naturalists only exercise, and which all those who wish to study psychical phenomena should seek to develop by regular and rational exercise. Instead of this, just because these phenomena are complex and obscure, we abandon them to the guesses of empiricism, or rather pretend to reach them with the Icarus wings of metaphysic.

This is the way in which I exercised my young people. I put before them a good photograph of a man or woman, and I invited them to express three judgments on this unknown face—one æsthetic, another moral, and the third intellectual. I did not put the question of health or of race, because a photograph only furnishes insufficient data for the first, and the second exacts ethnological science which my students could not possess. After collecting the bulletins which contained the triple verdicts, I discussed them with my pupils, asking the reasons for their opinions; then I combined the figures and prepared my statistics. That the judgments might not be rambling, I only

admitted three formulæ of verdict: *beautiful*, *ugly*, and *mediocre* for the æsthetic; *good*, *wicked*, and *mediocre* for the moral; *intelligent*, *stupid*, and *mediocre* for intelligence.

Here is the result of my experiments gathered together in a single table which demonstrates all the utility of research of this sort. When theoretical, moral, metaphysical philosophy and so many other false sciences shall have been transformed into experimental psychology, thanks to the natural law of evolution, feeling and thought will only be studied by this method.

OPINIONS ON PHYSIognomIES.

	Æsthetic.			Moral.			Intellectual.			
	Beautiful.	Mediocre.	Ugly.	Good.	Mediocre.	Bad.	Intellectual.	Mediocre.	Stupid.	
Thiebaut	46.2 6	15.4 2	88.5 5	88.5 5	28 3	88.5 5	61.5 8	15.4 2	28 3	13
Australian	16.7 2	8.8 1	75 9	41.7 5	2 ..	58.8 7	16.7 2	8.8 1	75 9	12
Roman Woman	90 9	10 1	.. ..	70 7	20 2	11 1	70 7	20 2	10 1	10
Roman Peasant	83.3 4	41.7 5	25 8	8.8 1	8.8 1	88.8 10	66.7 8	16.7 2	16.7 2	12
Woman of Siam	13.3 2	78.8 11	18.8 2	66.7 10	26.7 4	6.7 1	33.8 5	46.7 7	20 8	15
Negro of Zanzibar....	..	..	100 9	..	11.1 1	88.9 8	22.2 2	..	77.8 7	9
Little Girl of Bali....	..	72.7 8	27.3 3	72.7 8	18.2 2	9.1 1	27.3 3	45.4 5	27.3 3	11
Little Japanese Girl..	77.8 7	22.2 2	..	88.9 8	11.1 1	..	88.8 8	55.6 5	11.1 1	9
Man of Coromandel ..	40 4	30 3	80 8	30 8	10 1	60 6	50 5	40 4	10 1	10
	317.3	278.6	809.1	416.8	128.4	854.8	881.0	248.1	270.9	
	900			900			900			

As one sees, there is most agreement in the moral judgment, and least in the intellectual. The æsthetic judgment is balanced, and it is natural that it should be so.

Feelings leave a more profound and characteristic trace on our faces than thought, and also the latter may entirely disappear in a photograph. The greater part of our photographs possess the precious talent of transforming a man of genius into an idiot, whether he was called Shakespeare or Dante. On this point I shall always recollect an egregious photographer who purposed me much kindness, and who by means of head-rest and artistic posing strove to make of me an Apollo or a Byron. He gave himself so much trouble to realise this dream that from portrait to portrait he continued to make me more and more ugly and stupid. I let him do as he would, and so long as my patience and complacency lasted, I submitted to the torture which he inflicted on me with the best and purest intentions. Finally, at the tenth or eleventh attempt, I said to this excellent friend, "This time you will attain your end, and have a type of the perfect cretin."

There is another reason why our opinions agree often on the moral value of a face. It is because from our earliest childhood we have directed our observations in this way; for nothing is more important to us than to learn what we may expect of evil or of good from a man or woman whom we approach. It is much more interesting to know if a man is good or bad, false or sincere, than to know if he is more or less beautiful, more or less intelligent. To convince you of this, you have only to pretend to scold your child, letting signs of wrath and benevolence alternate on your face. This child will look you in the face, will study you unconsciously but profoundly; he will in turn make experiments on you, smiling when you are serious, and remaining serious when you smile, in order that he may succeed in discovering if you are really angry or if you are joking. You can go through the experiment again with an intelligent dog, and

seeing the same phenomenon reproduced, you will be convinced (if that is still necessary) that we must look for the alphabet of expression in children and in dogs, and not on the heights of metaphysics.

When an æsthetic opinion has to be formed, subjective influences bring a disturbing element; except in cases of extreme beauty or extreme ugliness, disagreements are frequent.

Two other conclusions appear from our table. In judging strong expressions, every one agrees; while divergencies are very great when uncertain expressions are in question. Thus I have been able to note that the agreement of opinion is at its maximum when a man of our race is in question, at its minimum when men very remote from our type, from a morphological point of view, are in question.

For example, nine opinions in ten are found to agree in recognising the beauty of a pretty Roman girl; one only declared her of mediocre beauty. Thiebaut, one of the two Accas who were at Verona, was declared beautiful by ten votes, ugly by five, neither ugly nor beautiful by two. However, when either beauty or ugliness is extreme, their effect gains on that of the ethnical element, and leads to conformity of opinion. Thus a negro of Zanzibar was unanimously declared ugly and a little Japanese girl judged beautiful by seven out of nine votes.

I have not collected, in the form of numerical data, my observations on opinions relative to the state of health or disease founded on the examination of the face. But, I can affirm, in these opinions that I call physiological that agreement is greater than anywhere else; perhaps because they are easier, perhaps because we are constantly exercising our faculties of observation in this direction. It is incredible the degree of perfection to which our senses may attain when they are always exercised in the same direction, and attention is imposed by powerful motives.

How often we hear the verdicts—Oh! what a beautiful look! it is really pleasant to see it!—Oh! poor man! what a bad look! He has not many days to live! and the like. What is more singular, in a like case the empirical judgment has great value, and is often equal to the opinion pronounced by men of science.

If you ask men ignorant of the medical art the *why* of their estimation of health or disease, you will see your admiration for the range of popular observation grow. All these *whys* will comprehend the half of physiology and pathology. They will all refer to the state of nutrition, the nature of the blood, or to the harmony and power of the innervation of the numerous muscles which cause the movement of the eye and the rest of the face. And these few shorthand signs, collected by popular experience, comprehend so great a part of our life that they may furnish sufficient criteria for us to form certain opinions.

What do we mean by a fine complexion if not a blood well furnished with corpuscles, neither too poor nor too plethoric, and circulating with suitable swiftness in the capillaries of the skin of the face? And, on the contrary, what do we mean by an ugly complexion if not a poor and vitiated blood, or extremely plethoric? And the vulgar are right in thinking that with the blood well constituted and circulating well we are at least half-way to perfect health.

A face neither emaciated nor obese will perhaps only say this: A good nutrition does not reduce by the excess of debit over credit; it does not fatten by the contrary excess. And inversely, does not the emaciation of the face proclaim the deficiency of nutrition, which leads little by little to death?

In the empirical conception which the vulgar have formed of a healthy appearance, not only do the blood and general nutrition enter, but also a certain vivacity of the muscles, which, like well-armed soldiers, are ready to begin action

at any moment. This vivacity of face is the sign that the nerve centres are in the best possible condition. And then, with good blood, good nutrition, a powerful innervation, how can one not be well? or how can we help feeling sympathetically awakened in us a great satisfaction at the sight of a picture of perfect health? All these empirical observations, collected, put in order, and despoiled of their scoria, will lead us to these two scientific definitions of *a healthy and an unhealthy look.*

The healthy look means that the face expresses general nutrition, an excellent chemical composition of the blood, and a harmonious and powerful innervation.

The *unhealthy look* signifies that one of these three conditions of good health is wanting. Either the nutrition is insufficient or excessive, or the blood is poor in corpuscles, or poisoned, or ill-provided with oxygen, or finally the innervation is feeble or irregular. These three conditions can exist together, or two at once, and the gravity of our verdict must be proportioned to the greater or less number of the disorders which we perceive on a face, and each of which indicates a pathological condition of one of the organs, or of one of the functions indispensable to the vital work.

In my *Physiology of Pain* I described some permanent expressions of physical pain, which are so many forms of the look of ill-health; but the authors who have written on general pathology and on clinical medicine have had to occupy themselves specially with this subject; for many times the outer aspect of the invalid, and especially of his face, suffices to make the nature of the evil guessed, and to put us on the way to a good diagnosis. There are some special functions where the particular nature of the sufferings is so faithfully inscribed on the face that it at once suggests to the observant doctor the diagnosis before any examination of the invalid. The tuberculous, the asthmatic, the hypochondriacal, the cancerous, have a

characteristic physiognomy and expression which even the vulgar can recognise. No one in modern times has treated the subject better than Polli, in his special study on the physiognomy of the sick,¹ a book of his youth which is perhaps the most beautiful monument of his active and daring mind. We do not think it can be displeasing to the reader if we draw from this work, published half a century ago, and too much forgotten.

Polli, after having defined pathognomy, or the study of morbid physiognomy, analytically examined according to age, temperament, and different features, the following special morbid faces :—

Painful face.	Lead colic face.
Ill-auguring ,,	Dropsical ,,
Moribund or hippocratic face.	Diabetic ,,
Cerebral face.	Intermittent fever face.
Pectoral ,,	Puerperal peritonitis ,,
Abdominal ,,	Hydrometric ,,
Hydrocephalous ,,	Arthritic ,,
Cardopathic ,,	Scorbutic ,,
Diaphragmatic ,,	Pellagra ,,
Pestiferous ,,	Tetanic ,,
Chleric ,,	Convulsive ,,
Influenza ,,	Hydrophobic ,,
Hysterical ,,	Parasitic ,,
Typhoid ,,	Onanistic ,,
Mesenteric ,,	

It is true that in these subtle distinctions there is much that is scholastic and much exaggeration. Several of these physiognomies are mixed, and have not a well-determined individuality; but still we must admire a great delicacy of observation in Polli. I shall recall here his most remarkable descriptions, which may also interest artists, since these latter have sometimes to represent certain diseased conditions in their pictures.

¹ Polli Giovanni, *Saggio di Fisiognomonia e Patognomonia*, etc. Milan, 1837.

The Moribund Face.—This has also been called the hippocratic, because Hippocrates made the first fearful description of it.

In the moribund person all the features grow feeble, they lose the expression of life, and approach immobility and the rigidity of inanimate life. The skin of the forehead is stretched; it becomes dry or is bathed in a cold sweat; the livid and falling eyelids only imperfectly cover the eyeball in the moments of somnolence and slumber in such a way that a white transverse streak appears below them; the cornea is flattened, grows dull, and is covered with a layer of mucus; the eyeball sinks into the orbit and allows a few tears to escape; the nose sharpens and grows cold, the alæ falling and approximating; the nostrils reveal the inner hairs covered with a sombre grey dust; the temples become concave, and the zygomatic bones protuberant; the cheeks hollow; the ears dry and shorter; the lips discoloured and wan, the lower hanging so that the mouth is constantly open.

The Onanistic Physiognomy.—Young people who have acquired unrestrained habits of onanism have a pale and leaden hue; frequently their skin becomes permanently of an icteric colour; on the forehead, on the temples, and on the sides of the nose, small sebaceous glands are changed into red pimples, which only disappear to give place to others; the eyes lose their brilliancy, they grow hollow, languid, misty, furtive; the pupil is constantly dilated and the sight gradually enfeebled, so much that prolonged reading induces suffering and tears; the lips lose their vermillion, they grow pallid and split; the teeth decay, the breath becomes strong and fetid. The expression of the face is stupid and melancholy; the manners betray embarrassment and a certain timidity, which an expert eye can at once attribute to the proper cause. The body generally presents a less advanced development than is appropriate to the age, and frequently the beginning of

wasting, and a tendency to stoop more and more, and a universal weakness. These individuals frequently unite the decay of an old man to the habit and pretensions of a young one ; their dreams are often interrupted and fearful, their intellectual faculties obtuse, and the memory almost entirely disappeared.

In woman the effects produced are analogous, although less rapid. The rosy colour of the cheeks gives place to a melancholy pallor, the lips are discoloured, the eye grows languid, the lower eyelids relaxed and of a livid and leaden hue ; the nose sometimes becomes painful, the chest flattened and flabby ; pustulous pimples disfigure the forehead, etc.¹

Polli also well described certain diseased constitutions. We will give as an example those of the apoplectic and of the phthisical.²

The Apoplectic Constitution.—A massy and dumpy body, large and muscled limbs, round shoulders, a wide and very short neck, the digits of both hand and foot short and thick, heavy and difficult, but firm movements ; a wide forehead ; a well-developed occiput, eyes generally small, eyelids often falling to the half of the eyeball, nose spongy, cheeks and chin voluminous, fat and lymphatic, the belly often inflated and obese, the head always warm, because the heart is near the brain, the mind irritable, unquiet, obstinate, nearly always vain and daring.

The Phthisical Constitution.—This constitution is nearly always exactly the opposite of the preceding ; it is recognised by the slim, strained, delicate, irritable fibre, by the whiteness and delicacy of the skin, by the mingling of certain signs of scrofula and rickets, by wavy hair, by a tapering and long nose, by very pronounced jaws, by the light colour of the hair and the beard, the size of the eyes, which are very open and generally blue (?), by the milky appearance of the sclerotic, by a slender, long,

¹ Polli, *op. cit.*, pp. 331, 368.

² *Ibid.*, p. 264, *et seq.*

forwardly inclined neck, where the blue veins are very visible, by a narrow and ill-formed chest, by a slim body, long and thin limbs. This constitution carries with it a quick, amorous, witty character, sometimes satirical, with a tendency to counterfeit others, and always a very precocious, intellectual development. Individuals of this temperament talk much, eat and sleep little, are of extreme susceptibility, love dissipation and light literature.

There is, however, another variety of phthisical people who are wasted and squat in body, have disproportionately long limbs and ill-balanced movements; they are destitute of this gentleness and delicacy of feature proper to the first; they are endowed with a feeble, indecisive, timid character, and present, like the others, a disposition to pulmonary consumption.

Polli's sketch of the phthisical physiognomy, taken when the malady has reached its last period, and when the wasting of the limbs has attained an extreme degree, is more successful.

The eye is retracted under the superciliary arch; now lively and brilliant, as though it had gathered together in itself all the vital energy about to take flight, now veiled by a livid eyelid, and surrounded by a yellowish rim; the forehead is dejected rather than wrathful; the hair scattered and disordered, which gives much expression to the face, especially in women; the temples and cheeks are hollow, withered, and fleshless, the corners of the mouth pressed on the teeth in a bitter smile; the chin is pointed and angular; the lips thin, pale, and languid, no longer meet; a small vermillion spot on the cheek-bones gives a deceitful aspect of life, similar, according to the expression of Balzac, to those reddnings of the west which announce the setting of the sun; the neck is long, thin, a little askew, limited by two prominent cords between which is a deep hollow, and in the man it is interrupted by the

scraggy kernel of the larynx ; the intercostal spaces are wide, and the ribs are very apparent in such a way as to form a double ladder on the chest ; in the woman the breasts almost disappear, nothing but the nipple remains ; the clavicle is almost detached from the trunk, and threatens to pierce through the stretched skin ; the limbs, almost bare of muscles, reduced to bones to which a little skin adheres, seem as if they must break at the first movement ; the joints are large and very pronounced ; the fingers and hand are dry, long, transparent, terminated by hooked and livid nails ; the increasing heat of the skin and the quick pulse tell of an organism devoured by an inner flame, the stove of which is in the lungs ; the living substance disappears little by little to leave but the frame of the body. This terrible disease, which frequently mows down the most beautiful and brilliant lives of youth, gives an expression of profound pain to the face, and to the moribund person whose intelligence has remained intact, who witnesses his own decay and the destruction of his body, who feels himself robbed of all the joys and all the happiness which the world promised to his youth, and has henceforth no solace but the miserable consolation of arousing pity.

Well-drawn as these pictures are, they have yet the great defect of always oscillating between vague indefiniteness and caricatures of the truth, and the hypochondriacs who read this book will, each of them, find his own portrait in these pictures.

The old doctors occupied themselves with pathognomy much more than the modern, because they had not percussion, auscultation, and all the modern means of investigation in the examination of a sick man. But the doctors of our day leave it too much on one side ; to-day, too, we might cry with Lavater, almost without changing his words, "A science of medicine resting on

physiognomy would be a work worthy of you, illustrious Zimmerman."¹

Among the ancients, those who wrote most learnedly on pathognomy are, after the divine Hippocrates, Aretæus, Leomnius, Emilius Campolongus, Wolff, Hoffmann, Schröder the elder. The work of Samuel Quelmanz, *De prosoposcopia Medica*, Lipsia, 1784, is also very remarkable; as also that of Stahl, *De facie morborum indice, seu morborum aestimatione ex facie*, Halle, 1700. Finally, we have to mention a more ancient book, which is very important: Thomæ Fieni, *Philosophiac medici præstantissimi, Semiotica, sive de signis medicis*, Lugduni, 1664.

¹ Lavater, *Essai sur la physiognomie*, etc., p. 125. The Hague, 1786. Lavater has only devoted four pages of his immortal work to pathognomy, in volume iii., chapter iii., entitled *On the Condition of Health and of Disease*; but in the little that he says he sets down with a certain hand the data of the problem; he shows that he has divined its importance, and has had a presentiment of the discoveries of the future.

CHAPTER XXII.

CRITERIA FOR JUDGING THE MORAL WORTH OF A PHYSIOGNOMY.

THE GOOD AND THE EVIL FACE.

SOME people pretend to possess naturally a certain divining virtue, thanks to which it is enough for them to look at a man to know whether he is good or evil, a cheat or sincere ; sometimes they believe they can go so far as to affirm that he is avaricious or a great spendthrift, gallant or a relative of the Hebrew Joseph. This pretension, which at times betrays itself in a rare and precious skill in guessing the character of a man by the examination of his face, is not founded on the conviction which one would have of possessing a secret virtue, hereditary as genius or beauty, and which neither work nor will could give. The only secret is to have an observing mind which can be sharpened by exercise, like all other intellectual aptitude ; in it there is no miracle or mystery of any sort. But evil is it for these privileged mortals if they attempt to pass from art to science and to translate into dogmas and precepts the fruit of their experience and of their sagacity ! Then they begin to get misty and to express vaguely that which they believe they understand perfectly. They transform into brutal aphorisms the most delicate and subtle divinations of their spirit of observation : a certain sign that a physiognomical art, but as yet no science, exists. This is well seen in Lavater, the most penetrating perhaps of the observers of the human face, and in addition, a very skilful draughtsman. When he attempts to teach us what he knows and to

make us share his convictions, he also falls into the vague and indefinite ; and I pity you, if in the practice of life you follow his precepts. Every moment you will be forced to recognise that Lavater has deceived himself ninety times out of a hundred, or that you have not been able to understand him, or, finally, that the men of his time did not resemble those of our own.

By the side of these artists of the physiognomy there is the multitude which has also its claims to powers of divination, but which always judges amiss because it observes ill and judges still worse. Daily the fatal consequences of this ignorance and this baseless pretension are witnessed. A young man in love thinks that his beloved is an angel of goodness and modesty, and she is a viper or a Messalina. At other times, in choosing a servant or a messenger, we judge of his virtue by his face, and give our confidence to a cheat or to a man full of every vice. The false criteria to which we refer in such cases, and which make us fall into precipices, are innumerable ; but there are two more habitual than others, and which at each step may open a trap beneath our feet.

Beautiful things are a pleasure to all ; thus it is very rare that we think a man or woman wicked who speaks to us with a pretty mouth and looks at us with beautiful smiling eyes. The chances of error increase much when it is a man who has to judge a woman, or *vice versa* ; then sudden sympathy, desire, love bind our eyes and make us judge the beautiful to be good, the ugly to be wicked. The proverb according to which "a squinting man is never free from malice," and which, under different forms, occurs in every language, is an audacious statement of this false criterium, which the vulgar employ to estimate the moral worth of a face. It is very true that extreme ugliness is often associated with a not very estimable character ; but it is also very true that one may be ugly as Socrates and good as he, and that one may also be contemptible

and perfidious with the face of Alcibiades or of Byron. How many daughters of Eve empoison our lives, sow around them treason and misfortune, and yet are more beautiful than the Venus of Milo !

The other criterium which leads astray our judgment on the moral worth of a human face is only the inductive criterium ill employed. It has been observed that a one-eyed individual was wicked ; it is thence concluded that all the one-eyed are individuals to be seized with tongs. A woman with a dimple in her chin has been found to be an angel, and thence it is concluded that all who have this dear dimple must be well-intentioned people.

The only scientific criterium which allows a judgment to be hazarded in such obscure questions is that furnished by expression. All temptations to æsthetic and anatomical criteria must be energetically resisted. Emotions, feelings, we have said a hundred times, are expressed in different ways, and expression by frequent repetitions leave on the face a permanent imprint, which has its significance, and which may reveal the whole character or the moral story of a man. All children have an apathetic expression, from which nothing can be read ; but it is almost impossible that a man above thirty years should bear no signs on his face which allow us to read some pages of his life, which reveal to us one of his virtues or one of his moral sores.

But here again, how many difficulties, what uncertainty in the use of this one scientific criterium ! A nervous and excitable man has a whole poem written in the wrinkles of his face ; while I have known a beautiful lady who, after having passed the critical and even the hypercritical age, had not yet one wrinkle. She had never wept, and almost never laughed, and for several years she had worn at night a little apparatus applied to each side of the forehead, fastened to the nape of the neck, and meant to draw the skin from the external angle of the eye, and thus to hinder the formation of the terrible crow's-foot.

If I have been followed so far in my analytical study of different expressions, the reader will have a guide to direct himself in the interpretation of a human face: this chapter might then appear superfluous. However, as some synthesis is necessary, it will not be useless to concentrate the light of Diogenes' lamp, having first decomposed it with the prism of analysis.

The two fundamental characters, the two most certain signs of a *good face*, are the *permanent expression of benevolence* and the *absolute absence of all hypocrisy*. ✓

To love, to love every one and always, to be incapable of hatred—this is the ideal of goodness; and this is written on an angelic face by many negative and by some positive characters.

Never to express either hatred, or cruelty, or passion, or rancour, or envy, or luxury, or debauchery—this is enough that the face may indicate a great fund of benevolence. If to these negative characters we add a half-smile which expresses permanent joy and the desire to please, to do well and to be loved, we have drawn the principal features of the physiognomy of the perfectly fine man.

I would like these lines, which affirm an incontestable fact, pondered by those pessimists who believe man to be born for evil, and only suppose him capable of a little good under the influence of education, or as an effect of fear or of interest. It is precisely the contrary which is true, and we, civilised men, in whom the last traces of anthropophagy have disappeared, have the desire to love, the sorrow of hating. The good man is happy, and he expresses his serenity, his content in loving and in being loved by a perpetual smile, which touches us and makes us cry with all the warmth of a profound conviction: Oh! how good this man must be!—Oh! what a saint this woman must be!

The habit of hatred, and of all vices which debase man and reduce him to the beast, impress, on the contrary, sadness

on the face, discontent, which reveals continual displeasure, and a perpetual state of war against self and against others. The contempt, the antipathy which the wicked excite increases in them the rancour, the secret and incessant desire of vengeance, which gives to the features of their face a sad expression. There are men who have never smiled, unless ironically, or with a feeling of satisfied hatred, and the muscles of their faces would absolutely refuse to express benevolence.

Another almost constant character of the physiognomy of goodness is to be frank, open to every emotion, incapable of hiding anything. In return a wicked face is always false. The good man, in fact, never distrusts others; he does not feel the need of withdrawing himself from an inquisitive observation; while the cheat avoids the looks of others in his invincible fear that they may read within him. It is incontestable that in every language of civilised people a *frank face* is synonymous with a *good face*, and a *false face* with a *wicked face*.

The *frank physiognomy* is that of the man full of serenity who does not flee from the looks of those who speak of him, or observe him. It expresses grief and joy, love and rage, without reticence, and without hypocrisy.

In the opposite case the muscles are always in a state of agitation, vaguely contracted or relaxed, so to speak, tottering, as though they did not know what emotion to obey, and what expression to take. This uncertainty is especially remarkable in the vacillating look which passes from one expression to the other, and which is more frequently turned aside than it is straightforward. It is because of this that we say, an *oblique* or a *furtive look*.

If anything may be clearly read on this face it is the unconscious fear that the eyes of others should succeed in surprising the evil inclination or emotion of which the guilty is fully conscious. This defensive attitude becomes little by little habitual, and it frequently happens that the

man with a false look, even in an indifferent conversation, never looks his companion fully in the face.

There we have one of the most certain revelations of a wicked character, and it is the more precious because the most hardened hypocrites do not succeed in dissimulating their crooked look under the thickest cloak of ingenuity, or by a forced smile. The muscles of the eye are always those which best resist hypocrisy, and which most easily obey the true emotions emanating from the nervous centres. One may weep when the soul is full of joy. It is possible to laugh with a lacerated soul; but it is almost impossible to openly front the look of others when the need is felt of hiding an emotion.¹

Often the emotion which one desires to hide is so strong that it is not enough to look aside or to give to the gaze an uncertain character; then the eyes close convulsively, spasmotic contractions of the lips or of the nose are

¹ Dom Pernetty has described with much vivacity the struggles of expression maintained by a dissimulating man—

"Does a dissimulating man wish to hide his feelings? Within him a struggle ensues between the true which he desires to conceal and the false which he would present. This combat throws into confusion the movement of the springs. The heart, whose function it is to excite the mind, drives it whither it should naturally go. Will opposes itself, bridles and holds it prisoner; it forces itself to divert the course and its effects to bring about change. But much escapes, and the fugitives come to bring certain news of all that is passing in the secrecy of council. Thus the more it is desired to hide the truth the more the trouble is augmented, and the better it is discovered."

Lavater, who quotes this passage, saying that he is perfectly of this opinion, adds of his own the eloquent description of a seducer who denies having made a young girl a mother, while she presents her child to the judge, crying, "Here is his father." Listen to the inspired language of the excellent pastor of Zurich—

"I have before me two people, one of whom has no need to constrain herself to appear that which she is not; the other is making prodigious efforts, and must disguise them with the greatest care. The guilty seems to have more assurance than the innocent, but to a certainty, the voice of innocence has more energy, eloquence, persuasion;

produced, or perhaps one yawns; let these symptoms always inspire you with distrust; they recall the backward or the sideward leap of the hare, which, pursued by the dog, returns on its own traces to cause the scent to be lost.

The words *good* and *wicked* are too coarse to express the different forms of character as well as the corresponding expressions. They are only poor shorthand signs, responding to the usages of ordinary life, to the imperfection of one language and to the shortness of human life. But art and science cannot content themselves therewith. A great romance writer employs an entire volume to describe the profound blackness of a villainous character, and Raphael presents to us the divine goodness of a mother under features which no one could reproduce.

To the negative and positive characters of the *physiog-*

to a certainty the look of the innocent is more open than that of the impostor. I have seen this look, with the emotion and the indignation which innocence and crime inspire, this look which could not be described, and which said most energetically: *Darest thou deny it?* I distinguished at the same time another look covered with cloudiness, I heard a rough and arrogant voice, but febler, more muffled, which answered: *Yes, I dare deny it.* In the attitude, especially in the movement of the hands, in the step when they were led away and brought back—the lowered look of the one, his dejected countenance, the bringing of the tip of his tongue to his lips at a moment when I represented all that is solemn and formidable in the oath which I was about to exact from them—while in the other a firm, open, astounded gaze, which seemed to say: *Just Heaven! and thou wouldest swear!* Reader, you may believe me, I heard, I felt the innocence and the crime."—(Lavater, *op. cit.*, t. ii., p. 13.)

The same writer has some golden words on frank faces—

"But where then is this simple and pure probity, recognised without effort and which is communicated without reserve? Where is this gaze which expresses candour, cordiality, fraternal affection, a naturally open gaze, without the need of forcing or paining it, an assured look which is never diverted nor wanders?"

"Happy the man who has found it! Let him sell all that he possesses to buy the field which holds such a treasure."—(*Ibid.*, p. 17.)

nomy of goodness might be added others of a higher order, which tend to idealise its expression. In the complete absence of all expression of evil, in the security of the smile, are then added a carriage full of dignity and courage, and a habit of looking up as though one would embrace all humanity in a single look of love, and contemplate vast and infinite horizons. The heroism of a sudden sacrifice suffered, or the constant abnegation of a whole life, the generosity of pardon or tenderness for all the pains of the earth, have been translated into immortal expressions by those great artists who have known how to charm the eyes, as they will always charm in the future, in representing Christ or the Martyrs. They have known, divining science by a sublime intuition, how to throw on a groundwork of perfect goodness the most brilliant tones of singular virtue, of generous impulses, of noble heroism. Rare expressions in nature! still more rare on marble and on canvas! for these are the fugitive gleams which appear one instant to disappear directly, and art scarcely succeeds in fixing them, thanks to happy observation and to a still happier divination.

At the opposite pole is found a face much less rare than the preceding, and which has been called *patibulary*, doubtlessly because the man who bears it seems predestined to the gallows or the prison. Here there is not only the absolute absence of all benevolence of expression or mere falsity of look. Every ferocious instinct has left its furrow on this face; every vice has deposited there its livid and obscene lines. Hatred, luxury, thirst for gold, inertia which wine alone can conquer, weakness which rage alone can aid, daily rancours which accumulate like the scoria of a volcano, a debauched sensualism and an invincible taste for filth, the harshness of a slow and incurable suffering, a ferocious laugh, the desire to see an ocean of blood, and to hear a chorus of groans, hatred under its harshest form, which pit the skin, pierce the flesh, and dry up the

marrow, an infinite baseness coupled as with a galley-chain to the ferocity of the carnivora; such are in broad lines the elements of a patibulary face, such as may be met with in the great places of expiation, called reformatories and prisons.

CHAPTER XXIII.

CRITERIA FOR JUDGING THE INTELLECTUAL VALUE OF A FACE.

THE STUPID AND THE INTELLIGENT FACE.

LET us look a man, woman, or child in the face and ask this question : What intelligence is there under this cranium ? What are the treasures of thought, of imagination, of will, which lurk behind this brow ?

These questions may be inspired by simple curiosity ; but they may also be associated with great disquietude when they apply to the face of one of our children, of the woman we love and whom we would see ours for ever, or of the political man to whom we think of entrusting the destinies of the country. Even in climbing down from these heights into the plain of ordinary life, how many times have we not need of reading in the face of a servant, a farmer, a partner, an employé, the degree and nature of his or her intelligence ?

The first time that I had the honour of meeting King Humbert, he inquired about my studies with lively interest, and said to me that it would be a precious gift to be able to divine the aptitude of a man by the shape of his head, and he asked me if science was in a condition to give us some rules to this effect.

If the old books of physiognomy are opened, many replies to the question of King Humbert will be found therein.

Not only could the old physiognomists tell us precisely

the quantity of intelligence enclosed in the head of a man; but they taught us to recognise his special aptitudes and his peculiar talents.

Giovanni Battista Dalla Porta gives us the following description of the clownish mind :—¹

“The parts which are about the neck and the arms are fleshy, bound and fastened together, but Polemon and Adamantius say that the cavities are united, that the great vessels of the tower of the neck are fastened, and that round κοτύλη is not seen. The shoulders high, forehead large, fleshy and round, the eye pale (κωωστι), stupid (that is to say, languid as the eyes of the goat are stupid). Agostino di Sersa, in consequence of his ignorance of the Greek language, translated : legs, approaching talons, fleshy and round, large and fleshy jaws. But Polemon and Adamantius had said : long legs and back. I suppose that in the text of Aristotle there is a fault, and that he does not mean to say παχεῖα, but βραχεῖα, that is to say, short, because the length of the arms and of the legs indicates a well-constituted intelligence, and inversely short legs are a natural imperfection and mark of coarseness. Polemon and Adamantius say, Slim joints, short neck. The extremities imperfect, they add, the neck fat and short, the face wide and fleshy, give an expression of foolishness and stupidity, completed by gesture, figure, and the habits betrayed by the face. But the text, as I have already remarked, is very corrupt. The same indicate as a sign of coarseness a very white skin (but Polemon says: not very white, but very dark, which is better, and I wonder that this was neglected by the other writer, because a very pale or a very deep colour betrays a natural imperfection, which is harmful to genius), a prominent belly, small and neat joints, well-knit extremities. Here the text of Polemon, who says τέλεια, must be corrected by that of Adamantius, who says ατέλη; for

¹ Dalla Porta, *Della fisionomia dell' huomo*. Padova, 1627.

these signs of the ingenious man and of the coarse man are quite opposite ; the first has very distinct fingers, well detached from each other ; the second has them bound and attached together. Avicenna, describing the face of a well-constituted man, gives as marks of little ingenuity and intelligence the great belly, short fingers, rounded face and head, too large or too small a figure, the forehead, neck and face fleshy, the face similar to a semi-sphere, the jaws large, the head and forehead rounded, the face long, the neck thick, and the movements of the eye very slow."

In all this medley, which Dalla Porta gives as the portrait of the stupid man, some rare truths which he has divined float to the surface among an ocean of useless words, mingled with positive errors ; for example, that which consists in indicating as a mark of intelligence the length of the arms. All the world to-day knows that the most stupid races have longer arms than the others.

Our Neapolitan physiognomist is not happier when he undertakes to give us the portrait of the *intelligent man*, borrowing the elements thereof from the works of Aristotle, Polemon, and Adamantius—

"They have soft and moist flesh, neither too rough nor too smooth, but between the two ; the face neither long nor short ; a white complexion, of agreeable aspect, and inclining towards vermillion ; soft hair, moderately abundant ; large and rather round eyes ; the head of medium size, in proportion to the neck ; the shoulders rather falling ; the legs and knees little fleshy ; the voice clear, intermediate between low and high ; the hands long, the fingers long and sufficiently delicate. They laugh little, weep little, and joke little. They have an expression of animation and of joy."

Further on Dalla Porta gives us his own portrait :—"Here is my face," he says, "and it is put there not for vanity, but that each may see my imperfections." One thing deprives this affected modesty of all its value, which is that the portrait is given us in the chapter which treats of

the *talented man*. As though this were not enough, he ends the chapter with these words—"My face is like that of my brother, Giovan Vincenzo, a great student of science."

Honoratius Niquetius, Jesuit and theologian, published in 1648 a *Physiognomia Humana*, in which at page 317 he also gives us his description of the *Viri ingeniosi et viri hebeti*.

Here it is—

"*Ingeniosi viri figura*.—Caro mollis, cutis subtilis, statura mediocris; oculi cœrulei, fulvi; color candidus; capilli plane molliores, longæ manus, digiti longi, mitis aspectus; supercilia coniuncta, modicus risus, frons exorrecta, tempora modice concava, caput in figuram, mallei conformatum *et hoc ultimum praestantissimum signum*.

"*Hebeti viri figura*.—Carnosum collum, cornosa brachia, sicut et facies, lumbi, costæ, pectus, mamillæ, occipitum cavum aut rotundum, nec extans ullo modo, frons magna, carnosa; oculus pallidus, caprini aut aquili coloris, aspectus hebes," etc.

A little after Cardan, in his *Metoposcopia* (Paris, 1658), pushed his horoscopic and astrological divinations to an absurd extreme.

Mgr. Giovanni Ingegneri, bishop of Capo d'Istria, says in his *Table of Remarkable Things* (Padua, 1626, p. 61), "A head small in proportion to the body is a sign of mediocre intelligence." This is very good, but he takes from its value by adding, "A small head indicates a wrathful man and a rancorous man."

These few examples suffice to give an idea of the criteria which served the old physiognomists in reading intelligence on the human face. Let us now arrive at an exposition of truly scientific criteria.

The experiments which I have made and which I have described above would be discouraging if one forgot that they had to do with portraits and not with living faces.

For beauty, criteria are nearly all anatomical ; for the moral value, they are nearly all expressive ; but to express intellectual value they are at once both anatomical and expressive, and it is not possible to determine exactly what part each of these two groups of criteria has in our judgments. It seems to me, however, that generally the anatomical criteria indicate with precision capital differences, while the expressive elements give signs of the slight differences and the different style of mind in men belonging to the same race. Niccolini (whose mask I possess) could not even when dead be confounded with a negro, nor even with an ordinary man ; but all those who visit my museum and to whom I show the mask of Mazzini ask me if it is that of a saint.

Anatomical characters which serve us in determining the probable intelligence of man by the examination of his face are all drawn from the relative development of the face and of the cranium, whether it be that with a glance of the eye we judge the volume of the brain, or whether, by roughly measuring certain angles, we determine the projection of the face on the skull.

Many centuries before craniology had been created the Greek artists, those great observers, had given to Minerva and to Jupiter a strong head, a spacious forehead, so orthognathous a face that sometimes the facial angle leans forward and exceeds 90°. On the contrary, they made the satyr microcephalous, with a narrow and retreating forehead, and thick and prominent jaws. To-day still, the crowd calls the human head which presents many simian characters stupid. Look at the head of a chimpanzee : you will see how there are idiots which resemble it, and recall how you are repelled by a flattened nose, two enormous ears, a narrow and retreating forehead, characters which all belong to the ape.

Some anatomical characters, without being directly related to the capacity of the cranium or to its situation

relative to the face, are, however, in consequence of the morphological harmony, signs of a lower rank in the intellectual series. No high race has a very small skull, or very large ears, or a flat nose, or a retreating chin ; and when we meet with these characters on the face of a man of our race, we are invincibly led to consider him of little intelligence, perhaps as an idiot, even before he has opened his mouth or accomplished before us a psychical act permitting us to judge him.

The following table gives a *résumé* of the actual state of the science relative to the value of the anatomical guides taken for the determination of the place of a human face in the intellectual series :—

ANATOMICAL CHARACTERS OF

THE INTELLIGENT FACE.

Large head, beautifully oval.
Wide, high, and prominent fore-head.
Eyes large rather than small.
Ears small or medium and beautiful.
Face small and not very muscular.
Not very prominent jaws.
Large and prominent chin.

THE STUPID FACE.

Small head or very irregular.
Narrow, retreating, smooth fore-head.
Eyes rather small.
Large and ugly ears.
Large and very muscular face.
Prominent jaws.
Retreating and small chin.

I have desired to present this picture, thanks to which you might, in the narrow ray of your experience, verify the uncertainty of these anatomical characters when they are used alone to judge the intelligence by the face. I am certain that every one would be able to find some exception weakening the rule, and present to me a stupid man with big eyes or pretty little ears, and on the contrary a man of genius with small eyes or great ears. But I am equally sure of another thing ; it is that such exceptions, very easy to find for each anatomical character taken separately, will be much rarer if two or three of the characters are

grouped together, and will become almost impossible if account is taken of all these features at once in a comparative study.

The most important characters are those drawn from expression, which may make manifest an extreme energy of thought on the grotesque face of Socrates, as on the Apollo-like face of Goethe.

The two great expressive centres of the face are always the eye and the mouth. The first best expresses the degree of intelligence, and the second the force or feebleness of will.

Common and empirical opinion attributes to the man of intelligence a vivacious eye, to the stupid man a dull eye. In reality, in the first, centrifugal energies are continually disengaged which find a large exit in the numerous muscles of the eye ; hence the movements and oscillations of these muscles, hence again the veil of tears which renders the eye brilliant.

In the intelligent man, not only the eye, but all the muscles of the face have a mobility, a vivacity, a constant tonicity, thanks to which they are always ready to rapidly express the most different emotions.

The face of a man of genius is a soldier with arms and baggage, always ready to fight ; that of the stupid man is an ex-lazzarone, always minded to sleep, and yawning half-an-hour before deciding that he ought to rise.

The stupid face has relaxed muscles, a half-open mouth, often one eyebrow higher than the other, and a vague and uncertain look which is directed to no definite point.

In the intelligent face all the muscles are half contracted ; they are apt, always in action. In the face of the man of genius there is a continual phosphorescence of emotions and of thoughts which pass and repass, and a permanent crepitation of energies.

Between the stupid face of the idiot and the face of Voltaire, all salt and pepper, there is the ordinary face

which represents a medium quantity of thought and of will.

The expressive centre of the mouth expresses better than the eye the passions which animate thought, and the energy of will.

The idiot, in whom will is very feeble, has a hanging jaw, often permitting the escape of saliva. In the man of mind, but of not very energetic will, the mouth is always half open. In the energetic man the jaw is closed; often even the muscles contract strongly, and the chin is thrown forward.

The maximum of will nearly always corresponds to this expressive formula—a *large chin thrown forward, and mouth closed*.

On the contrary, flaccid will is represented by a *small retreating chin, an opened or half-opened mouth*.

Intellectual expression may take exaggerated and almost pathological forms; they can always be reduced to a muscular *tic* which is an involuntary, passing and intermittent contraction of some facial muscles. These *tic* often accompany the abuse of thought, and I have met them often in men of genius, otherwise very different from each other in the nature of their intelligence.

I shall cite Lombardini, the great hydraulicist, Perruzzi, a man of singular activity and of extraordinary political subtlety, and Carducci, the greatest of living Italian poets. The first has always had singular *tics* on the face, which have increased with age; then to the convulsions of the face succeeded those of the trunk, of the arm, and of the hand, and finally, within later years, they became augmented so as to constitute a veritable chorea which rendered the use of speech very difficult to this great man. Perruzzi has also two or three *tics* on the face which he cannot control, and which are the more pronounced the intenser the thought. On the face of Carducci at certain times a veritable tempest breaks out; lightnings shoot from his eyes, and an earthquake possesses his muscles.

All this may be applied to intelligence taken as the sum of all the psychic energies; but each form and each moment of the thought has its proper expression which we have tried to define in our analytical studies. I shall content myself with adding here a few lines to complete the pictures of intellectual expression.

The two most striking expressive pictures of intellectual energy are those of the imagination which creates, and of meditation which seeks. In the expression of imagination every movement which has its centre in the eye or in the mouth seems to be directed from the middle of the face towards the periphery, so that the general expression is centrifugal. The eye is widely opened, and looks up; the mouth opens and enlarges. At the same time the neck is reared and the head raised, and forces us to look up or towards the horizon.

In the meditative face, on the contrary, every movement starts from the periphery, and is concentrated towards the middle of the face; the eyes are half closed, or even closed; the mouth is also closed; the head bent on the breast, as though the organism were bent on itself, to seek in itself that which the inspired man seeks outside in the wide horizon of nature.

The expression of imagination often passes to pathological and convulsive forms, and may, with some modifications, become *inspired, poetic, delirious*. The meditative expression, by its exaggeration, may become ecstatic, fixed, and almost approach that of the stupid face. In expression it is a constant law that extremes touch and mingle in almost the same tint.

CHAPTER XXIV.¹

THE PHYSIOGNOMY OF GESTURES AND THE EXPRESSION OF CLOTHES.

IF at present there is no hope of the triumph of Volapuk or of any other universal language, we see many languages disappearing spontaneously and in various ways. They vanish either through the dying out of the people who talk them, or by the fusion of a small nation in the mass of a larger nation which absorbs it. It is well known that in the vast regions of the United States there does not exist a single dialect, while once even a single province contained various dialects. Over this, however, we cannot rejoice so much as in the fact that, if we have no universal tongue, we have a universal writing. In Europe all languages are written with few varying characters, and Morse's telegraphic alphabet is used all over the world.

There exists, however, a true and distinct universal language which is understood by every one, and was invented by no one, and that is the language of gestures. I refer, of course, to spontaneous and imitative gestures, and not to the conventional gestures of deaf mutes, which are nothing else than a form of handwriting.

The language of gesture is found among all nations; but it is necessary to give a precise and scientific definition of it. Some narrow too much the conception of gesture, others enlarge it too much, introducing other heterogeneous elements. Among these is Dr. Hérincourt, who believes

¹ This chapter has been written by the Author specially for the English edition of this work.

that "gesture includes all the muscular and other functions which result in the sound of the voice, the way of speaking, the expression of the face, the movements of the arms, and the carriage."¹

I believe that I shall be giving a scientific definition of gestures when I call by that name *all those muscular movements which are not absolutely necessary to complete an act or a psychic function, but which accompany it by sympathy of nervous influence.*

The language of gesture in man is only auxiliary to the spoken language, while it is the sole language of all animals which emit no sounds. Insects, especially ants, talk with each other by means of their antennæ, or other parts of the body, and although we cannot generally understand them, they communicate emotions and ideas.

Gesture is a very elementary and simple language, but it is very clear, because it is founded on the basis of our common psychic nature. It serves sufficiently well to express the simple emotions and needs, but it is no longer of use when we wish to express abstract ideas and more complicated sensations. Try to say by means of signs, not to a savage, who would not understand you even with the help of words, but to a civilised man like yourself, that you are a monist, and he certainly will not understand you. In my long journeys through South America and India I frequently came in contact with men who spoke languages unknown to me, but with the help of gestures alone I was always able to make known my wants, and to make contracts for the acquisition of objects.

Gestures are not all alike ; they may be divided into two great categories—viz., *automatic* and *voluntary*. Often, however, these pass into one another by intermediate gradations.

In walking we always move our arms, though we do not perceive it. That is an automatic and involuntary gesture.

¹ *La Graphologie, Revue Philosophique*, vol. xx. (1885), p. 499.

But if we are very glad or very angry we give to these movements of the arms an unusual character, which becomes the expression of joy or of anger, and of these expressions we may be conscious or not, in different cases.

The automatic gestures are important to study, because they are the outcome of the whole nervo-muscular organism, and form part of the physiognomy of a race or of an individual. I venture to say that gestures are sometimes more important than the face, in which we are only concerned with the anatomy of its muscles and bones, while gestures, besides these, comprise the structure and the physiology of the cerebro-spinal system. Every one will recollect that children sometimes resemble their parents more by their gestures than by their faces ; though in these cases, beside the influence of heredity, there enters imitation, which strengthens and rivets the anatomic fact.

In biology and in psychology (which is the same thing) the equation $100 = 100$ is unlike, and more important than, $2 = 2$. In this connection I shall always remember a walk in the neighbourhood of Rome with a joyous troop of artists, all Italians ; one of us alone was a Roumanian, and among the Roumanians (if they will not be offended) there is so much Slavic blood that the Latin element, if it exists, is completely hidden. Now this Roumanian had an altogether Italian face, and no one would have been able to distinguish him in this respect from the Latins whom he accompanied. This fact surprised the artists, who are accustomed to observe features and expressions with as much attention as anthropologists and psychologists. I remarked to them that they should observe the walk and gestures of this Roumanian gentleman ; and in fact, while in all the manifold elements of the human face he was an Italian, seen from behind he walked like a Slave or a German.

You may often confuse a German or an Englishman with

an Italian or a Frenchman if you look at their faces, but never, or very seldom, when you see them walking.

Many centuries ago Petronius, who, like all true and great poets, was an acute observer of men and things, said—"Nec auguria novi nec mathematicorum cœlum curare soleo, ex vultibus tamen hominum mores colligo, et cum spatiantem vidi, quid cogitet scio."¹

In Europe, owing, with few exceptions, to race, there is a northern method of gesture and a southern method. I observed eloquent evidence of this fact, which is obvious to all, during my travels in Scandinavia and Lapland. "In Germany one already begins to see the men moving with another system of gesture, and the women, to keep them company, do the same ; but in Scandinavia the curved line of movement is absolutely prohibited in all cases and in all directions. They walk in angles, they smile in angles, they sit and they rise and they talk in angles ; and these angles are acute. You may find beauty, force, majesty, a thousand æsthetic elements of the human figure, but grace is absent and unknown. Who will give me one of these flexible movements which are a poem of eloquence and pleasure, that grace of the Greco-Latin race ? "²

If I had to trace the main outlines of a comparative science of human gesture among various races—at all events those that I have noted—I would say that the Latin race had in their gestures a gracious and voluptuous manner, that those of the Anglo-Saxon race are rigid and angular, those of the highest Oriental races majestic and Olympian, those of negroes and Australians ape-like.

Automatic and involuntary gestures often aid indirectly the muscular action which they accompany. Thus it is with the movements of the arms in walking. In other cases in which a mechanical reason for the gesture does not exist,

¹ *Petronii Satira*, 126, 22-24.

² Mantegazza, *Viaggio in Lapponia coll amico Sommier*, p. 10. Milan, 1881.

or is not obvious, we are dealing with extra currents which are diffused by sympathy, irradiating muscular regions outside the action of work. Automatic gestures are found most frequently in the arms, less frequently in the head, the neck, the trunk, rarely in the feet.

Independently of the limbs moved, gestures may possess a human character—that is, they may be weak or strong, slow or quick, rhythmic or disordered, centrifugal or centripetal. Experience very soon teaches us to estimate their expressive value, and, without the aid of language, often even without looking into the individual's face, we say, "He is glad, or sad, or in despair, or enraged, or mad."

All muscular labours, all the acts of the psychic life are accompanied by special gestures, which do not form an integral part of the picture of expression, but which accompanies it as a secondary element. I will limit myself to the examination of a few of these gestures.

Gestures of Walking.—When the arms are free they follow the ambulatory rhythm, giving a special feature to the mode of walking. Place yourself at a window and observe the passers. They all move their arms, and some, by the movement of their upper limbs alone, tell you whether they are angry or annoyed, sad or glad. Race, the varying energy of character, muscular force, age, sex, a passing or permanent emotion, are all elements which contribute to furnish their tribute to the gesture of the arms in walking. Besides the organic elements, there are other extrinsic circumstances which modify it, more than anything else, the form of the garments. To convince oneself of this it is sufficient to observe people walking in summer and in winter, according as they wear mantle or overcoat. Without observing the thermometer we can, by looking through our windows at the passers, judge of the degree of temperature. The naked man walks best of all. The clothed Orientals give to their ambulatory gestures a grace and majesty which cannot be imagined by

those who have not seen them. Our own clothes render us more agile, but they rob us of many beauties of human movement.

The Orator's Gestures.—Oratorical gestures are still more necessary and more irresistible than those of walking, and if we were to bind the arms of the most eloquent man in the world while he was speaking, he would either faint or explode, or in less disgraceful case would be compelled to lose more than half of his real efficacy. Every orator has his own characteristic gestures, which are an integral part of his oratorical style. Cavour, who did not always find language obedient, twisted and lowered his head; Minghetti without a paper-knife in his hand could not succeed in finding that lofty eloquence habitual to him, by which he so much resembled the great English orators; Cavallotti, small of stature, and always violent in thought and form, repeatedly struck the air with his arms, as though to fix and rivet his ideas in the ears of the hearer.

The Worker's Gestures.—It would seem *a priori* that one who is working ought to be very economical of his muscular movements, making use only of those which are strictly necessary for the work in hand. In practice it is not so; nearly always work is accompanied by rhythmical movements which give no mechanical aid to the work, but which render it more pleasurable, and therefore easier.

The influence of pleasure on work has been too little studied. We only know that it renders it easier, and that weariness either is not produced or becomes imperceptible when work is pleasant. The physical cause of this fact is quite unknown. Every one knows, however, that it is one thing to take a walk for pleasure and another thing to take the same road on business affairs; and gymnastic exercises are more beneficial to health when they are pleasurable than when they are only the fulfilment of a duty. The song of the sailors hauling the ropes, or of rowers who accompany their movements with rhythmical

sounds are as ancient as man and universal in every race. The Brazilian negroes, when they have to carry great burdens, are preceded by one or more of their companions carrying funnels full of sand and stones to mark the march with rhythmical sounds, and those who before were sinking under their burdens harmoniously move their limbs and facial muscles in the strangest and most ridiculous way. *Invita Minerva* holds true not only for intellectual work, but for muscular work.

The expression of clothes would deserve special study, because the excitement of our emotions passes, voluntarily or involuntarily, to the textures by which we are covered. Dress is certainly one of the human elements by which races, nations, and individuals express most of themselves, and certainly the acute Rabener did not exaggerate when he wrote *Kleider machen Leute* (the clothes make the man), an idea, for the rest, which we find expressed in the proverbs of many and various nations. It is not, however, of methods of clothing, nor of the various materials with which man covers himself that I propose to speak, but of the part which dress takes in expression when the movements of our muscles are diffused in the peripheral territory of that which covers us. The amount of clothing is one of the elements which most influences and modifies expression, as it is natural that the various forms of which clothing is capable should increase in the ratio of the territory of which they have to dispose. At opposite poles we may place the coolies of Madras, whose clothing consists of less than a square foot of cotton stuff, with which they cover the sexual organs, leaving all the rest of the body naked; and the *senorita* of Euterias, who in my time, besides all the ordinary garments of European ladies, wore twelve *enaguas* (petticoats), with respective and varied lace adornments. The expression of clothing in the coolie's case, therefore, only holds two notes relative to the organs covered by the fig-leaf, while the elegant Euterian possesses a rich

dictionary of possible movements with which she knows how to express a thousand various gradations of modesty, grace, and coquetry.

The mobility of dress exercises a very great influence on the æsthetic and the expansion of the expression. It is sufficient in this connection to note our European garments, in which we are as it were imprisoned, and the mobility of the old Roman pallium, and of the present garments of India. The slight mobility of our clothes adapts us better for the various tasks of our laborious and combative existence, but its concealment of expression and frequent disfigurement of the anatomical beauty of our bodies is the chief despair of modern art.

As for the muscles of the face, body, and limbs, so also for dress, there is a centrifugal and centripetal expression, an excentric and a concentric. We see the first generally accompanying pleasure and love; the second with the more ordinary emotions of sorrow and hatred. In dress, as in the limbs, when the emotion reaches its highest degree, every specific character tends to disappear. The greatest analogy between the movements of the body and those of the clothes is found during accesses of pain and anger and hate. The tearing of the hair, the biting of the lips and nails, the laceration of the flesh, correspond to the tearing of buttons, of ribbons, of cuffs, and the other fragile portions of our dress up to the complete destruction of all the clothing.

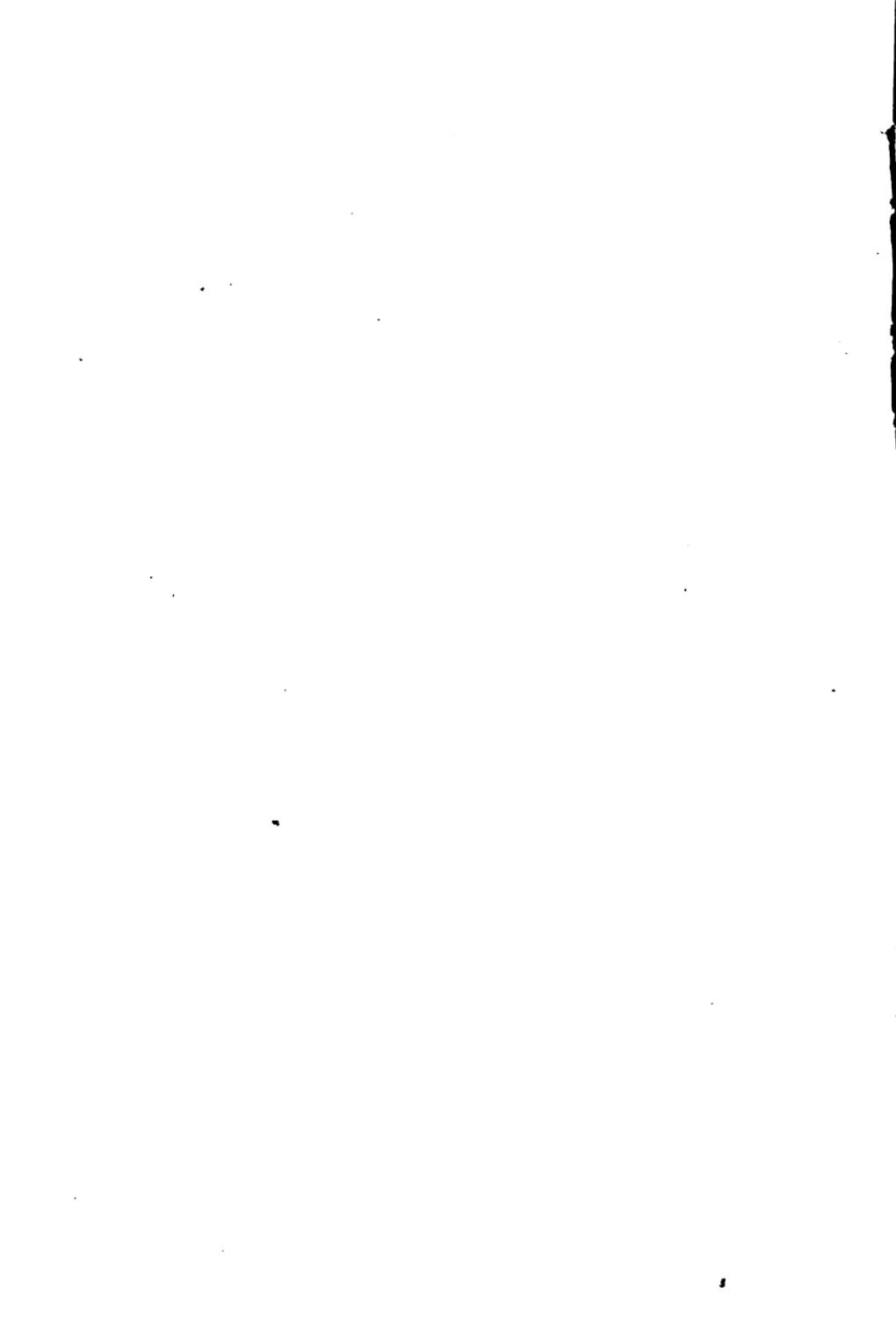
Every emotion, every passion, every intellectual labour may find some expression in the clothing, and this may vary in its turn according to the differing degrees of emotion, passion, and thought, just as these contribute to modify physical expression, sex, age, character, state of health, and all those other elements which we are accustomed to include under the name of environment. Character, which is a very large and various synthesis, can express itself partly in the way in which we move our garments, and

the most ordinary observers can recall in this connection the appearance of the miser and the prodigal, the candid man and the hypocrite, the neat man and the disorderly. The rhetorical expression, also, of many poems is strengthened by elements supplied by clothing, and any one who has had the good fortune to see the great actor, Gustavo Modena, will never forget the high art (in this case the most beautiful expression of nature) with which, as Orestes, he played jovially with his Greek chlamys, or as the dying Louis XI., convulsively caressed his royal mantle.

Finally, the stick, which is not a garment, nor adapted to any part of our body, is carried variously by various individuals, and is able to express the emotion which agitates us, joy or sadness, anger or annoyance. Heredity, also, exercises an influence on the mode in which we carry a stick ; I, for example, without having known my paternal grandfather, carry my stick in exactly the same manner as he, so as to wear away obliquely the extremities of the sticks I use.

If artists would observe with greater attention even the most minute and insignificant facts of expression, they would give us historical pictures more exact and more conformed to the truth of nature.

APPENDIX.



APPENDIX.—EYES, HAIR, AND BEARD AMONG THE ITALIAN RACES.¹

Districts.	Communities in which the predominant colour of the Iris is—			Colours of secondary importance.																				
				Dark.	Light.	Dark.	Light.	Dark.	Light.															
	Brown.	Black.	Grey.	Total.	Blue.	Black.	Grey.	Total.	Blue.															
Piedmont ..	33	7	40	7	4	11	65	14	79	14	7	21	7	6	18	12	5	17	23	20	43	41	16	57
Lombardy ..	33	12	50	8	10	18	56	18	74	11	16	27	28	9	8	17	10	7	27	23	60	20	50	
Emilia and the Marche ..	32	6	38	1	14	15	61	11	72	1	13	28	35	8	1	9	4	5	9	45	5	60	22	50
Liguria and Tuscany ..	22	11	33	1	5	6	57	28	85	2	13	15	15	7	1	8	5	5	5	54	7	61	23	39
Umbria and Latium ..	11	10	21	..	..	5	66	34	90	..	10	10	5	4	9	4	2	6	84	26	60	27	33	
Upper Neapolitan Provinces ..	45	14	59	2	8	5	71	22	98	3	4	7	6	8	8	18	..	12	12	20	83	63	..	48
Puglia, Calabria, and Basilicata ..	66	10	76	..	12	12	76	11	87	..	18	13	6	15	21	1	14	15	17	42	59	2	38	41
Sicily ..	22	13	35	..	1	1	62	36	98	..	2	2	6	6	11	1	2	2	47	38	65	..	15	16
Sardinia ..	10	1	11	..	..	91	9	100	..	..	..	..	1	1	1	..	1	..	50	60	..	50	50	
The Kingdom ..	306	101	407	19	54	73	64	22	80	8	11	14	60	51	111	88	55	87	81	25	56	16	33	40

¹ According to the inquiry of the Italian Anthropological Society by Dr. Raseri.

APPENDIX.**COLOUR OF THE HAIR.**

Districts.	Number of Communes in which the predominant colour is—							Colours of secondary importance.						
	Brown.	Black.	Fair.	Total.	Brown.	Black.	Fair.	Brown.	Black.	Fair.	Total.	Brown.	Black.	Fair.
	Absolute figures.				Per cent.			Absolute figures.				Per cent.		
	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.
Piedmont .. .	36	15	2	52	67	29	4	8	9	2	14	21	64	15
Lombardy .. .	56	16	1	73	77	23	1	10	7	3	20	50	35	15
Liguria .. .	10	5	..	15	67	33	..	2	1	..	3	67	33	..
Venetia .. .	44	6	4	54	81	11	8	4	1	4	9	44	11	45
Emilia & the Marches	32	8	..	40	80	20	..	8	4	4	11	28	36	36
Umbria .. .	15	16	..	31	48	52	..	8	8	1	7	48	48	11
Tuscany .. .	24	9	..	33	73	27	..	8	4	2	9	33	45	22
Upper Neapolitan Provinces .. .	57	18	2	72	79	18	8	4	10	1	15	27	67	6
Puglia, Calabria, and Basilicata .. .	50	16	2	77	16	21	8	9	21	1	31	29	68	8
Sicily .. .	12	22	1	35	31	68	8	9	1	1	11	82	9	9
Sardinia .. .	9	2	..	11	23	18	..	2	..	..	2	100	..	..
For the Kingdom .. .	353	123	12	498	71 $\frac{1}{2}$	26	2 $\frac{1}{2}$	52	61	19	132	39	46	15

COLOUR OF THE BEARD.

Districts.	Communes in which the predominant colour of the beard is—							Colours of secondary importance.						
	Brown.	Black.	Fair.	Total.	Brown.	Black.	Fair.	Brown.	Black.	Fair.	Total.	Brown.	Black.	Fair.
	Absolute figures.				Per cent.			Absolute figures.				Per cent.		
	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.	Absolute figures.	Per cent.
Piedmont .. .	21	12	2	38	68	81	6	8	5	..	8	38	62	..
Liguria .. .	10	4	..	14	71	29	..	1	1	..	2	50	50	..
Lombardy .. .	45	20	2	68	67	29	14	6	2	..	8	8	25	25
Venetia .. .	38	8	3	49	77	17	6	2	1	5	8	25	13	62
Emilia & the Marches	32	3	..	35	71	9	..	1	2	2	5	5	20	40
Umbria .. .	16	6	..	22	73	27	..	2	1	2	3	67	33	..
Tuscany .. .	24	9	1	34	71	26	3	2	4	2	8	25	50	25
Upper Neapolitan Provinces .. .	44	18	4	66	67	27	6	4	4	2	10	40	40	20
Puglia, Calabria, and Basilicata .. .	65	18	1	84	77	22	1	4	11	1	16	25	69	6
Sicily .. .	13	17	1	31	42	55	8	6	..	1	7	86	..	11
Sardinia .. .	6	4	..	10	60	40	..	1	..	..	1	..	..	100
For the Kingdom .. .	318	119	14	451	70	26	4	32	29	15	76	42	38	20

In Italy generally, as in each of its particular divisions, the prevailing colour of the hair is brown; then comes black, and finally, light hair, which only prevails in $2\frac{1}{2}$ per cent. of the communes examined.

Nevertheless, in the countries where the colour of the hair varies very much, the fair holds an important place; but generally it is the black which comes after the brown, or *vice versa*.

Fair only comes second in 15 per cent. of the communes examined; in the others it is the rarest of all.

The region most abounding in fair hair is Venetia. There, in 8 per cent. of cases, fair is a predominant colour, and in 45 per cent. it takes the second place. After Venetia comes Piedmont, then the Neapolitan provinces and Sicily. In Central Italy there is no commune where fair hair is predominant, but those where it is abundant are not rare.

Black hair is very common in Sicily and in Umbria, but very rare in Venetia.

Regions.	Number of Communes where the Hair is generally—					
	Thick.	Scanty.	Total.	Thick.	Scanty.	
	Absolute figures.			Per cent.		
Piedmont	26	17	43	60	40	
Liguria	8	3	11	73	27	
Lombardy	48	18	66	73	27	
Venetia	37	13	50	74	26	
Emilia and the Marches	32	2	34	96	6	
Latium and Umbria ...	14	4	18	78	22	
Tuscany	11	15	26	42	58	
Upper Neapolitan Provinces	57	9	66	86	14	
Puglia, Calabria, and Basilicata	74	13	87	85	15	
Sicily	27	3	30	90	10	
Sardinia	7	3	10	70	30	
Kingdom	341	100	411	77	23	

Beside the colour, it is right to indicate the abundance of the hair, which is determined accordingly as thick or scanty

hair predominates in each commune. The above table shows how the different parts of Italy are divided in this respect.

Thus in more than three-quarters of 441 communes which have furnished data, thick hair is predominant. It is only in Tuscany that scanty hair predominates, and in the adjoining Emilia there is only, so to say, thick hair. Generally hair is thicker in the south than in the north of Italy.

It seems that the colour of the hair does not largely affect its abundance.

As to the form, hair is essentially distinguished as smooth and curly. The latter, according to Prüner-Bey, are elliptical in transverse section, while the former are almost circular.

The following table indicates, region by region, the number of the communes where curly hair predominates or is at least very frequent in proportion to the smooth hair:—

FORM OF THE HAIR.

Regions.	Number of the Communes where the predominant form of the hair is—				
	Smooth	Curly.	Total	Smooth	Curly.
	Absolute Figures.			Per Cent.	
Piedmont	42	1	43	98	2
Liguria	13	...	13	100	...
Lombardy	51	7	58	88	12
Venetia	46	3	49	94	6
Emilia and the Marches ...	35	2	37	94	6
Umbria	18	1	19	95	5
Tuscany	30	...	30	100	...
Upper Neapolitan Provinces ...	61	2	63	97	3
Puglia, Calabria, and Basilicata	86	5	91	95	5
Sicily	29	1	30	97	3
Sardinia	8	1	9	89	11
Kingdom	419	23	442	95	5

Curly hair only predominates in five per cent. of the communes examined. Lombardy, Venetia, Emilia, and Sardinia form a group where curly hair is particularly abundant.

Liguria, Piedmont, and Tuscany are in opposite case. It seems that there is no relation between the colour and the abundance of the hair on one side and its form on the other.

Finally, we have still to seek for information respecting the length of the hair. But many of those consulted understood that we wanted to know whether the male population was in the habit of wearing the hair long or short; others, on the contrary, believed that we meant the real length of the women's hair. In consequence of this confusion it has not been possible to collect in a statistical table the data relative to this last part of the inquiry.

Beard.—Nearly all the communes which replied to the preceding question also replied to Question 13 on the colour, length, and abundance of the beard.

The colour of the beard does not always agree with that of the hair; the intermediate brown is less frequent, which augments the proportion of black and of fair.

Still brown is always in the majority; but in some cases brown hair is associated with a fair beard, and still more often with a dark brown beard.

Regions.			Number of the Communes where the predominant beard is—				
			Thick.	Scanty.	Total.	Thick.	Scanty.
			Absolute Figures.			Per Cent.	
Piedmont	...	...	15	12	27	55	45
Liguria	...	...	9	2	11	82	18
Lombardy	...	...	33	24	57	58	42
Venetia	...	...	26	17	43	60	40
Emilia and the Marches	...	...	20	7	27	74	26
Umbria	...	...	15	5	20	75	25
Tuscany	...	...	15	12	27	55	45
Upper Neapolitan Provinces	...	...	57	7	64	89	11
Puglia, Calabria, and Basilicata	...	...	66	10	76	87	13
Sicily	...	...	22	5	27	81	19
Sardinia	...	...	7	3	10	70	30
Kingdom	...	...	285	104	389	73	27

Generally the thickness of the beard corresponds to that of the hair. In the southern provinces thick beards are more frequent than in the northern; the difference between the two regions is still more accentuated than for the hair.

This greater development of beard in the southern provinces agrees with the fact that the beard grows more strongly in summer than in winter. According to the experiments of Professor Moleschott, the increase in length in summer would be in the proportion of 122 to 100 to that in the winter.

Tuscany, which is distinguished by the frequency of scantiness of hair, shares this character with Piedmont in respect to the beard.

Another very important character relative to the beard is the custom predominating in a people of wearing it long or short. The following table shows how much the diverse regions differ in this respect:—

Regions.	Communes where the custom prevails of wearing the beard—				
	Long.	Short.	Total.	Long.	Short.
	Absolute Figures.			Per Cent.	
Piedmont	7	18	25	28	72
Liguria	3	4	7	47	53
Lombardy	8	36	44	18	82
Venetia	13	29	42	31	69
Emilia and the Marches	8	18	26	31	69
Umbria	4	11	15	27	73
Tuscany	2	16	18	11	89
Upper Neapolitan Provinces...	13	37	50	26	74
Puglia, Calabria, and Basilicata	19	40	59	32	68
Sicily	9	14	23	39	61
Sardinia	5	5	10	50	50
Kingdom	91	228	319	29	71

In more than two-thirds of the communes examined the custom prevails of shaving or of wearing the beard short. It is especially in the southern provinces that there is a taste

for wearing it long. These regions have also been seen to be distinguished by the thickness of the beard, while Tuscany, however, where scanty beards are the most numerous, is the region where the wearing of it short is most prevalent.

Red Hair.—Professor Topinard considers red-haired people to be the residue of a race which has almost disappeared, and which had formerly advanced to the borders of the Rhine and to England. Dr. Beddoe, on the contrary, looks upon red hair not as an ethnical but as an accidental character. The Ethnographical Inquiry has devoted a special question to the frequency of red hair in Italy. To collect the results, I have deemed it useful to divide the communes into four groups. I have put into the first those in which red hair is not rare (generally in the proportion of 3 to 8 per cent.); in the second, those in which it is rare; in the third, those in which it is very rare; and finally, in the fourth, those where it is never met with at all.

FREQUENCY OF RED HAIR.

Regions.	Communes in which red hair is—							
	Absent.	Very rare.	Rare.	Not rare.	Absent.	Very rare.	Rare.	Not rare.
	Absolute figures.				Per cent.			
Piedmont.....	5	20	22	1	10	42	46	2
Lombardy.....	5	27	27	9	7	40	40	13
Venetia	1	21	27	2	2	41	53	4
Emilia and the Marches.....	...	17	18	4	...	44	46	10
Umbria and Liguria.....	3	8	9	...	15	40	45	...
Tuscany	2	15	18	6	4	37	44	15
Upper Neapolitan Provinces	5	26	31	5	7	39	46	7
Puglia and Calabria	19	33	30	8	21	37	33	9
Sicily and Sardinia	5	25	14	...	11	57	32	...
Kingdom	45	192	196	35	9½	41	42	7½

In all parts of the kingdom red hair is found, but in very small quantities. Of all the communes examined, there is only one, that of Santa Agata, in Puglia, where it has been said that red hair is the predominant colour in the population. Countries very remote from each other, as Lombardy, Emilia, Tuscany, and Puglia, present the greatest number; while other countries, still more distant from each other, as Piedmont, Umbria, and Sicily, are most scantily supplied. It cannot be said that the abundance of red hair is related to that of fair, since, as we have seen, Lombardy, Emilia, and Tuscany are precisely the regions poorest in fair hair; while Piedmont and Venetia are the richest.

Baldness.—As far as this question is concerned, doctors take account of three special conditions—

- 1st. Was baldness frequent in the prime of age?
- 2nd. Was it frequent only at a tolerably advanced age—say, after fifty years?
- 3rd. Did the hair remain tolerably abundant into a ripe age—say, nearly up to sixty?

The different regions divided in these three categories have given the following results—

Regions.	Number of Communes where Baldness is—						
	Frequent before 50.	Frequent only after 50.	Rare even at an Advanced Age.	Total.	Frequent before 50.	Frequent only after 50.	Rare even at an Advanced Age.
	Absolute Figures.				Per Cent.		
Piedmont ...	16	27	1	41	36	62	2
Lombardy ...	25	38	7	70	36	54	10
Venetia ...	17	32	5	54	31	60	9
Emilia and the Marches ...	10	30	2	42	24	71	5
Tuscany and Liguria ...	18	24	1	43	43	55	2
Umbria... ...	6	14	...	20	30	70	...
Upper Neapoli- tan Provinces	17	45	4	66	26	68	6
Puglia, Calabria, and Basilicata	26	66	3	95	27	70	3
Sicily & Sardinia	10	32	2	44	24	71	5
Kingdom ...	145	308	25	478	30	65	5

The population of Tuscany, which was already in the first rank for scanty hair, is also that in which the hair falls off soonest and most readily.

Disregarding Tuscany, the falling off of the hair is less precocious in the centre and southern provinces than in Northern Italy.

EXEMPTED FROM MILITARY SERVICE

Regions.	For Baldness.		For Diseases of the Scalp. ¹	
	Absolute figures, 1874-77.	Annual average on 10,000 visits.	Absolute figures, 1874-77.	Annual average on 10,000 visits.
Piedmont	109	10	494	23
Liguria	22	7	93	15
Lombardy	464	35	1940	73
Venetia	121	13	563	40
Emilia	61	8	408	25
Umbria	44	19	171	36
The Marches	34	10	155	21
Tuscany	157	19	473	29
Rome	45	15	259	42
Abruzzi	211	40	962	92
Campania	336	29	1715	96
Puglia	194	33	1320	112
Calabria, Basilicata	189	31	1836	87
Sicily	205	17	1079	46
Sardinia	47	19	226	46
Kingdom ...	2239	20	10,894	52

The aspect changes when we pass into the more specially pathological domain. Precocious baldness, in so much as it is a cause of exemption from military service, is met with in all parts of Italy, as may be seen from the preceding table.

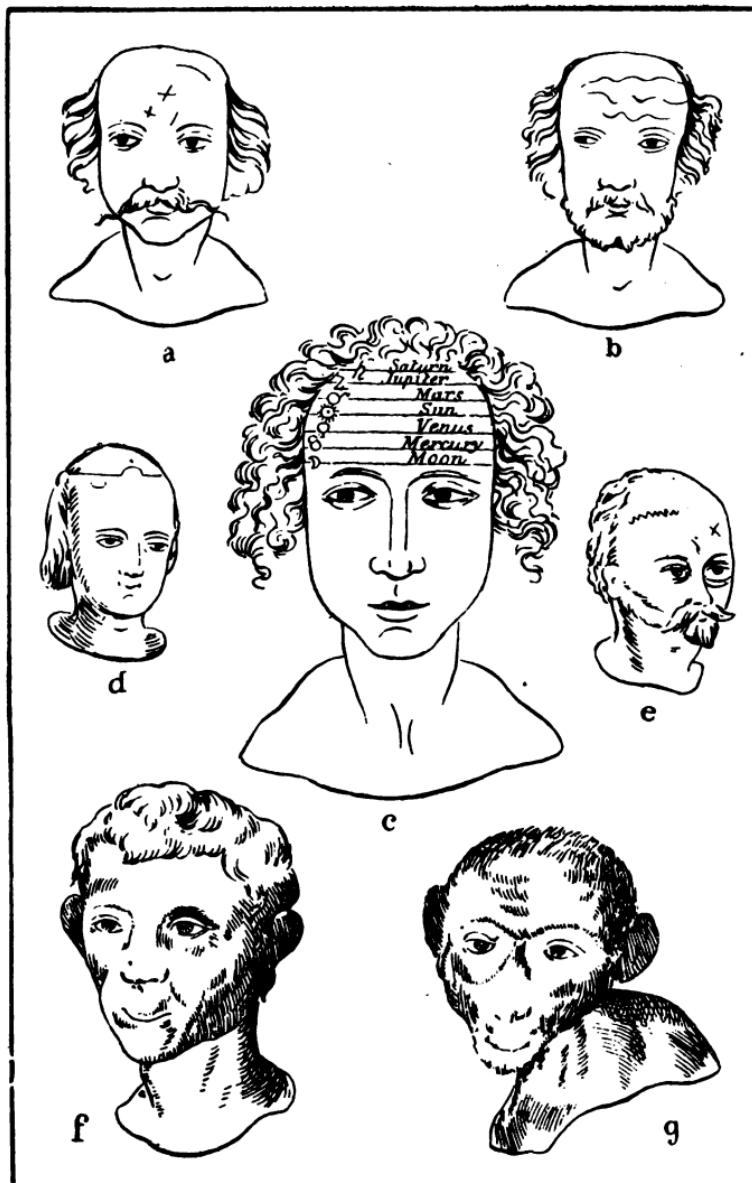
I should not be able to explain why the regions in which hair is the scantiest and where it is retained the longest, are

¹ Alopecia, scabs and permanent organic lesions of the scalp.

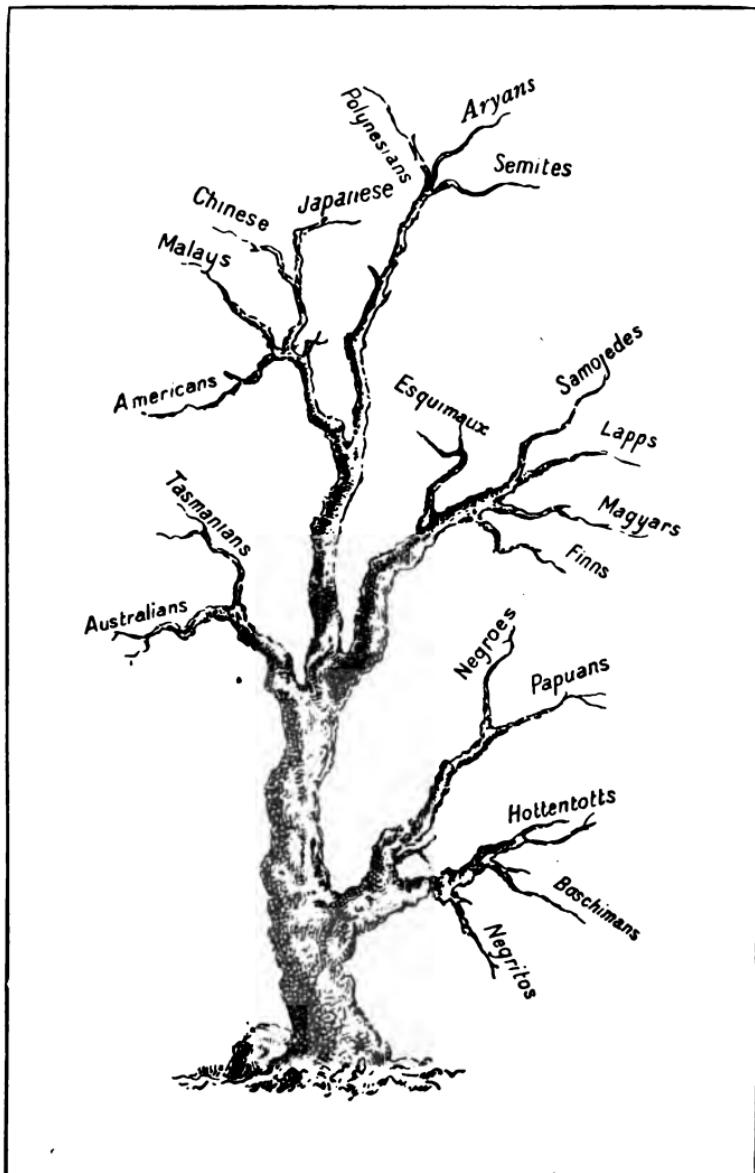
also those in which the alterations of the scalp are most frequent.

In Italy, of 1000 rejected conscripts, eight are on account of precocious baldness; while in the Neapolitan provinces the cases of exemption for this cause rise to 51 out of 1000.

ANCIENT FIGURES OF JUDICIAL ASTROLOGY.



*a, b, c, Figures from Cardano. d, e, Figures from Finella.
f, g, Man compared to the Ape.—Dalla Porta.*

PLATE II.
MORPHOLOGICAL TREE OF THE HUMAN RACE.

ÆSTHETIC TREE OF THE HUMAN RACE.

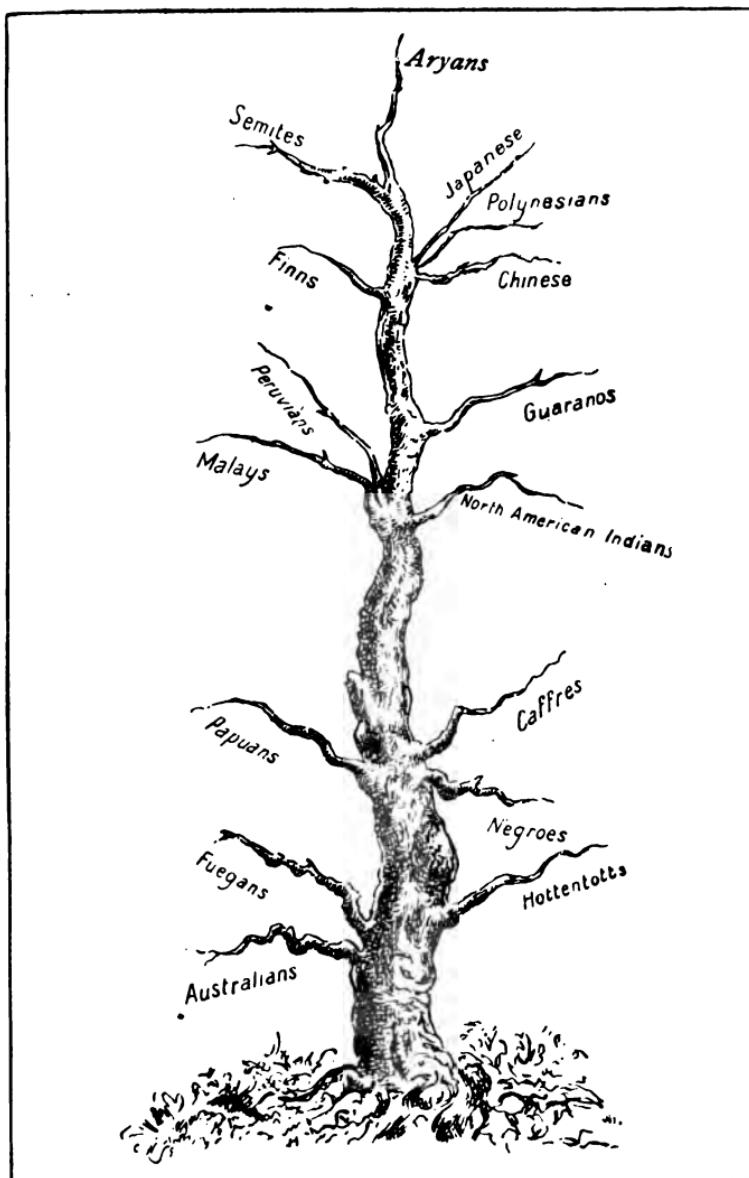
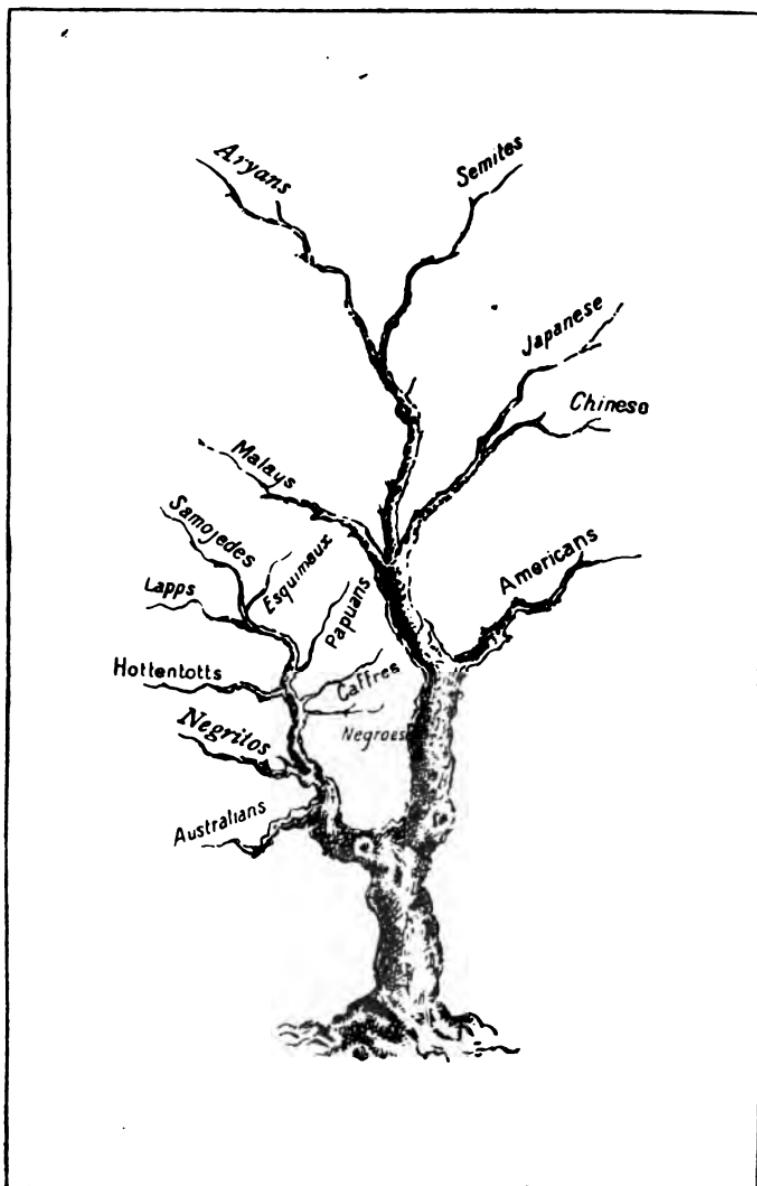
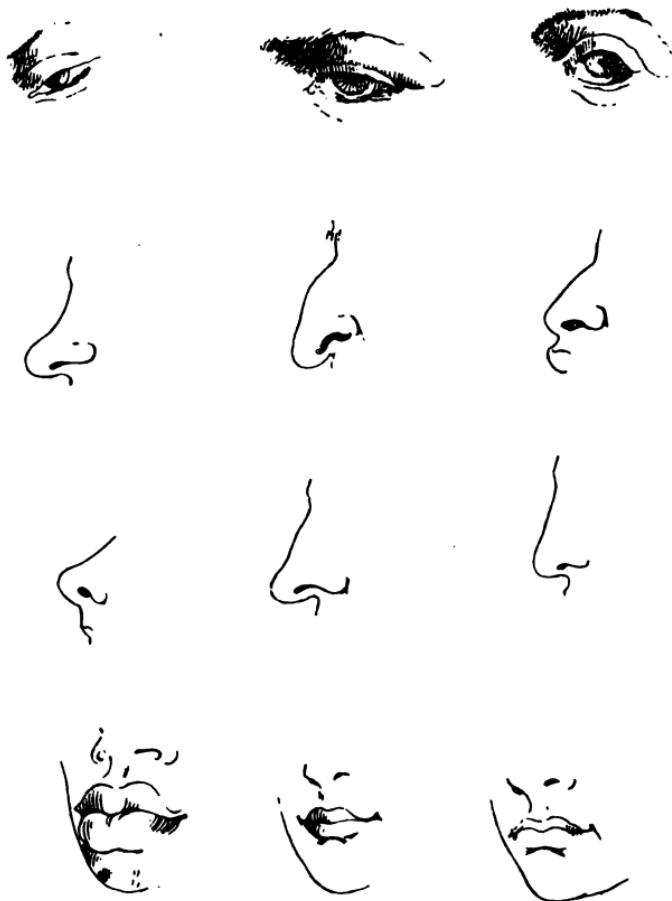
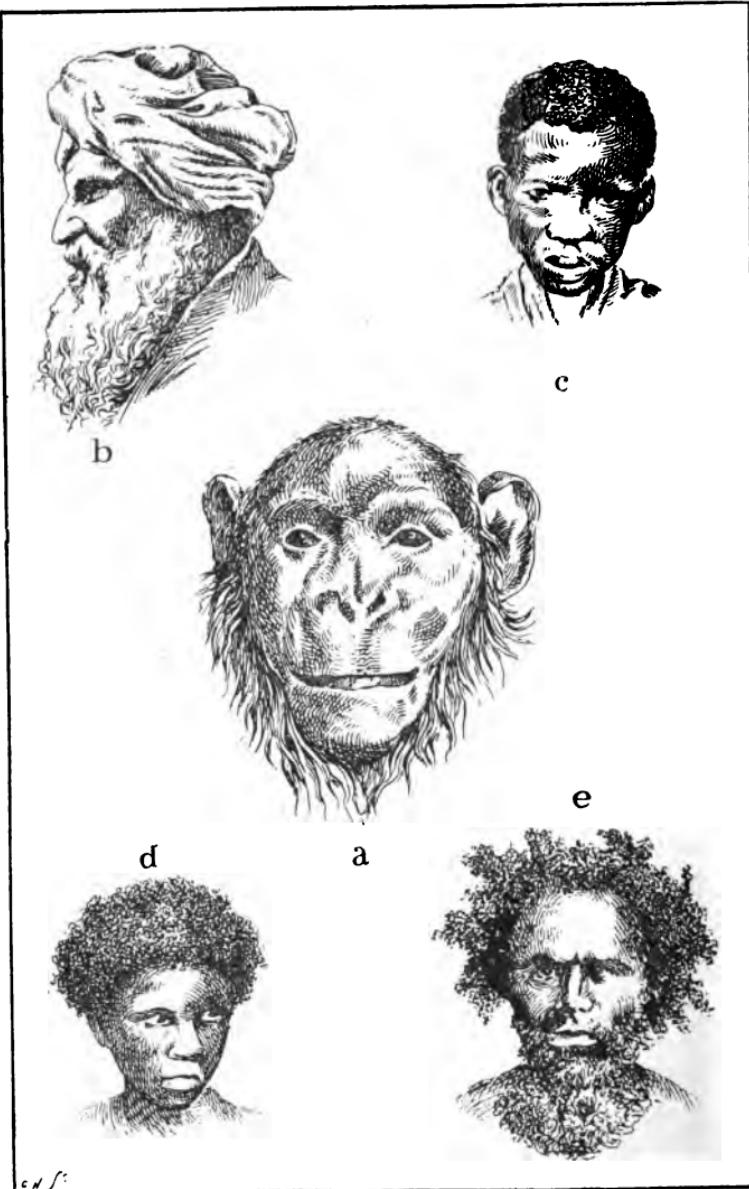


PLATE IV.
INTELLECTUAL TREE OF THE HUMAN RACE.



a, b, c—Various forms of the Eyes. *d, e, f, g, h, i*—Various forms of the Nose. *k, l, m*—Various forms of the Mouth.



a, Chimpanzee. b, Arab. c, Hottentot. d, Papuan. e, Australian.



b



c



d

a

e



a, Negro from Central Africa. b, Mongol. c, Negrito. d, Pampa.
e, Javanese.



a, Peruvian Idol. *b*, Maori Idol. *c*, Papuan Idol.

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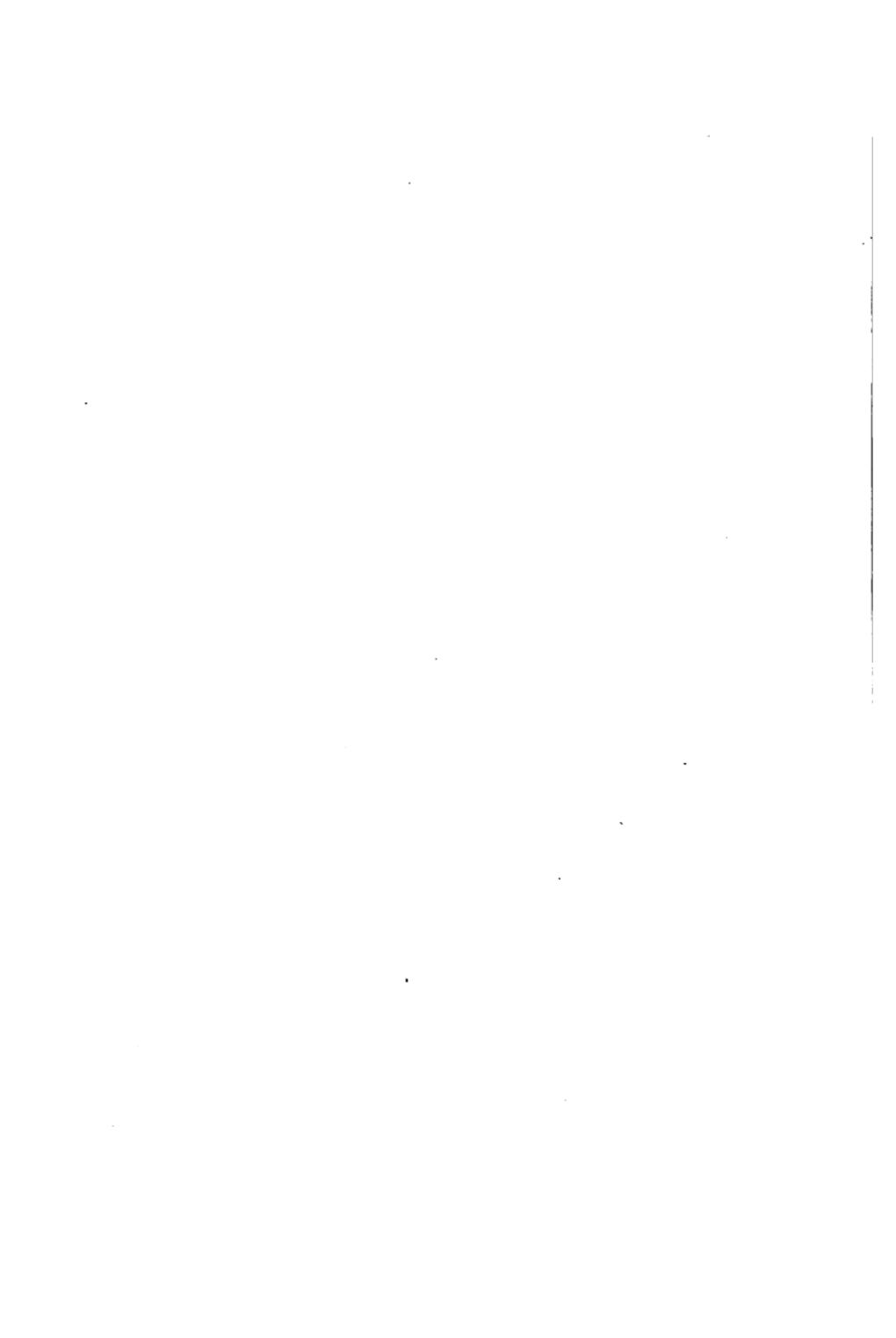
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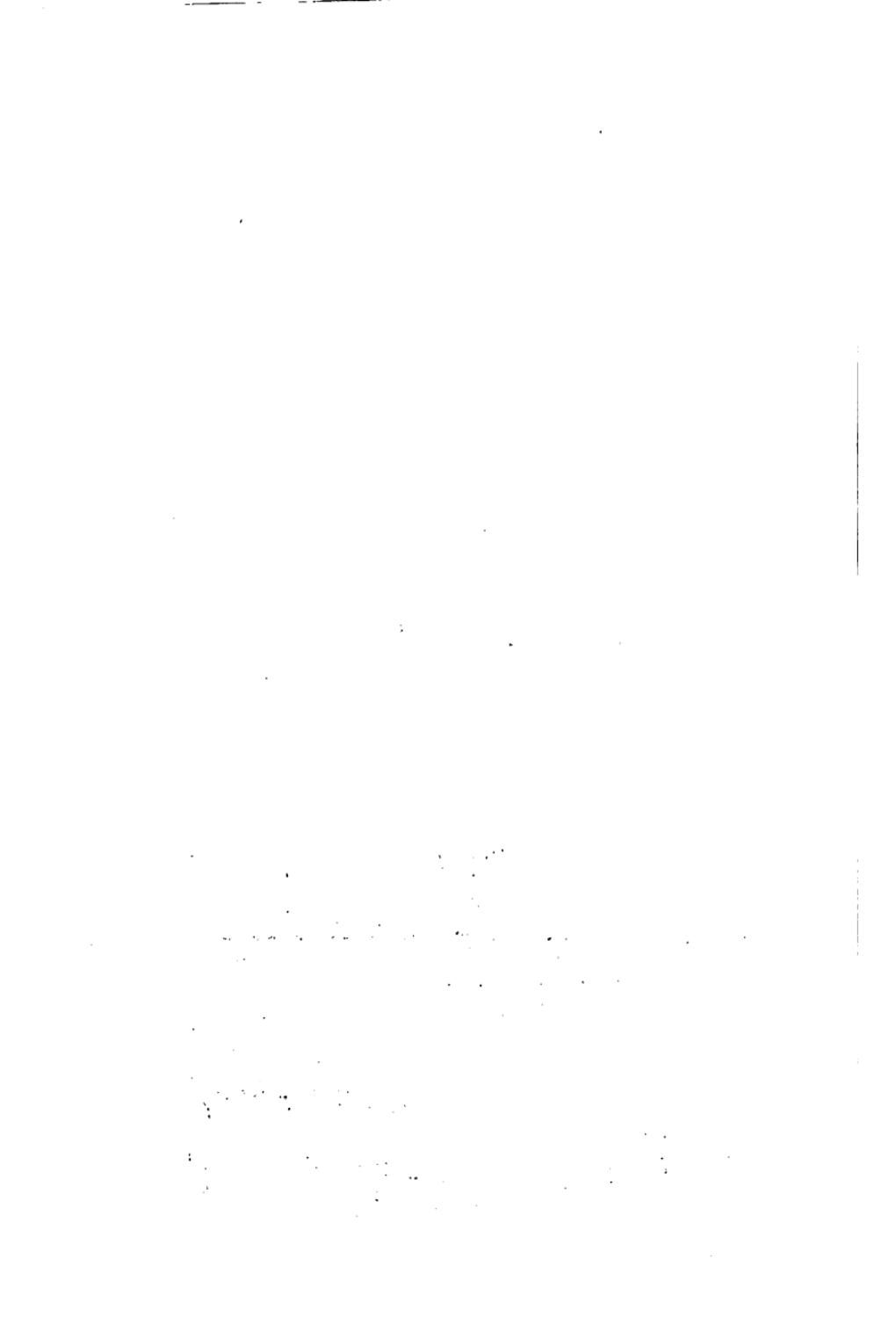
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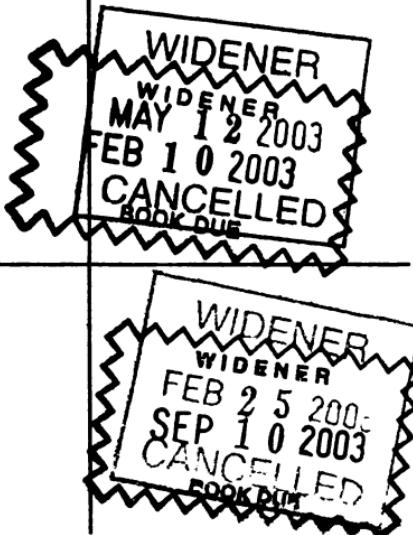


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